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Thursday
June 14, 1979

Part III

Environmental Protection Agency

Draft Consolidated Permit Application Forms and Proposed National Pollutant Discharge Elimination System Regulations

ENVIRONMENTAL PROTECTION AGENCY

[FRL-1233-8]

Draft Application Forms for EPA Programs

AGENCY: Environmental Protection Agency.

ACTION: Publication of draft application forms.

SUMMARY: Elsewhere in today's **Federal Register**, EPA is proposing regulations to consolidate certain permit programs administered by the Agency. As part of this initiative, EPA is developing a single set of forms and instructions to be used for applying for permits issued under the consolidated permits program.

This notice solicits public comments on draft of several parts of the consolidated permit application form and accompaning instructions. When complete, the consolidated application form will consist of a general form asking for information common to all programs within the consolidated permits program (including an identification of the facility and a general description of the pathways by which pollutants are released to the environment), followed by specific forms tailored to the different programs.

The forms included today are: (1) A general form for applicants for EPA permits; (2) a form to apply for National Pollutant Discharge Elimination System (NPDES) permits under the Clean Water Act for concentrated animal feeding operations and aquatic animal production facilities; (3) a form for existing industrial dischargers applying for NPDES permits under the Clean Water Act; and (4) a form for hazardous waste management facilities (HWM facilities) which require hazardous waste storage, treatment or disposal permits under the Resource Conservation and Recovery Act.

Additional forms will be published for public comment in the future to reflect the application requirements of other programs within the consolidated permits initiative.

DATES: Comments must be received on or before September 12, 1979 to be considered.

A pamphlet describing the proposed regulations and their relationship to the new NPDES application form has been prepared, titled "A Guide to the Consolidated Permit Application and Conforming NPDES Regulations" (C-7). This pamphlet, and six other pamphlets describing the final NPDES regulations, the proposed consolidated permit regulations and other proposed regulations pertaining to the consolidated permit programs are available from the Environmental Protection Agency, Public Information Center (PM-215), 401 M St., SW., Washington, D.C. 20460.

Meetings open to the public to discuss and receive comments on the consolidated application form are scheduled for four cities. These same meetings will also serve as a forum to receive comments on other aspects of the consolidated permits program, including the consolidated permit program regulations which are proposed elsewhere in today's **Federal Register**, and reproposed part 146 of the Underground Injection Control (UIC) regulations published on April 20, 1979 at 44 FR 23738. Both the RCRA and the NPDES portions of this consolidated application form will be discussed on the second and third day of each meeting.

These meetings will be held at the following places and dates:

July 16, 17*,18, 1979, Northpark Inn, 9300 North Central Expressway, Dallas, Texas.
July 23, 24*, 25, 1979 HEW Auditorium, 330 Independence Avenue SW., Washington, D.C.
July 26*, 27, 28, 1979, Water Tower Hyatt, 800 North Michigan Avenue, Chicago, Illinois.
July 30, 31*, August 1, 1979 EPA Region X, 1200 6th Avenue, Seattle, Washington.

At each public meeting, registration will be held from 8:30 to 9:00 a.m. and comments will be received from 9:00 a.m. until concluded, or no later than 5:00 p.m. In addition, an evening session will be held on the dates noted with an asterisk above, from 7:30 until concluded. Anyone wishing to make an oral statement at the meetings should notify the following person in writing, specifying the meeting dates and the city in which they are interested: Ms. Judith Shaffer, Permits Division (EN-336), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460.

ADDRESSEE: Comments should be addressed to: Edward A. Kramer (A-1), Permits Division (EN-336), Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460 (202) 755-0750.

FOR FURTHER INFORMATION CONTACT: Edward A. Kramer (A-1), Permits Division (EN-336), Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460 (202) 755-0750.

*Day and evening sessions.

SUPPLEMENTARY INFORMATION:

I. Introduction

In the interest of regulatory reform, the Agency is presently consolidating its permit programs wherever feasible. The goal of this effort is to eliminate gaps and overlaps among the programs, to insure consistency of regulatory approaches of the various programs, and to provide the regulated community with uniform procedures. Although statutory constraints preclude complete uniformity, the Agency believes that the goal of consolidation should be pursued to the extent possible.

The Agency has already begun its consolidation efforts by proposing consolidated regulations elsewhere in today's **Federal Register** for five programs: The Hazardous Waste Permit Program under sections 3005 and 3006 of the Resource Conservation and Recovery Act (RCRA), the Underground Injection Control (UIC) program under sections 1421-1423 of the Safe Drinking Water Act (SDWA), the National Pollution Discharge Elimination System (NPDES) permit program under section 402 of the Clean Water Act (CWA), the permit program for dredged or fill material under section 404 of the CWA, and the prevention of significant deterioration (PSD) program under the Clean Air Act.

During the preparation of the consolidated regulations, many overlaps, gaps and inconsistencies in regulatory coverage were discovered and eliminated by the various EPA program offices responsible for each program. In addition, procedures for approving State programs, applying for permits, issuing permits, and other similar matters were made consistent to the extent permitted by law and sound policy.

EPA is now taking another major step in its consolidation effort by developing a single set of application forms and instructions for the following four programs:

(1) Hazardous waste;

(2) Underground injection control (UIC);

(3) Discharges to surface water (NPDES, with separate parts designed for existing industrial dischargers, new industrial sources and discharges, publicly owned treatment works, and concentrated animal feeding facilities); and

(4) Prevention of Significant Deterioration (PSD) for new sources under section 165 of the Clean Air Act.

The fifth program covered by the consolidated permit program regulations, the section 404 dredge or fill program, is not included in EPA's

consolidated application form project at this time since EPA does not issue these permits.

The family of forms for the consolidated permit program is as follows, including those parts that are reserved for addition in the future:

Form 1—General Information
Form 2—Discharges to Surface Water (NPDES Permits)
a. Publicly Owned Treatment Works [Reserved]
b. Concentrated Animal Feeding Operations and Aquatic Animal Production Facilities.
c. Existing Manufacturing, Commercial, Mining, and Silvicultural Operations
Form 3—Hazardous Waste Information Summary (RCRA Permits)
Form 4—Underground Injection of Fluids (UIC Permits) [Reserved]
Form 5—Proposed Facilities (PSD new sources, NPDES new sources and new dischargers, and new injection wells)
a. Compliance with Other Environmental Laws [Reserved]
b. Application for PSD and NPDES Permits [Reserved]
c. New Source Applicability Questionaire (PSD and NPDES) [Reserved].

Forms 1, 2b, 2c and 3 and associated instructions are included in today's public notice. The forms and instructions which are reserved in this package will be developed according to the following schedule:

	Federal Register Notice	Final form
Form 2a	December 1979/	July 1980
Form 4	August 1980	April 1981
Form 5	December 1979	July 1980

The goals of the consolidated application form are to:

(1) Reduce paperwork burdens upon applicants and resource burdens upon EPA and State officials in the preparation and review of applications under more than one permit program.

(2) Insure consistency of application requirements.

(3) Insure that applicants consider and report, at a single time and in a uniform manner, all pathways by which they release pollutants to the environment. This will make clear to the applicant and to EPA (or an approved State) precisely which programs apply, resulting in proper regulation of all sources of pollution as required by the various statutes. It will also facilitate the development by permit writers of consistent permit conditions under the various programs.

The consolidation effort is an EPA initiative. States are encouraged, but not required, to consolidate their programs. EPA hopes that today's notice will set a positive example for States to follow.

EPA's consolidation effort is limited by the fact that in many cases some programs will be operated by EPA's Regional offices while others will be operated by States, sometimes by different offices in a State. Thus, for example, an applicant might be required to apply to EPA for an NPDES and UIC consolidated permit, to one State agency for a hazardous waste permit, and to another State agency for a PSD permit.

To minimize this problem, EPA intends to actively encourage further consolidation of programs. EPA also intends to notify applicants by letter as to which Federal and State offices operate which programs. In addition, permit program coordinators will be available in each EPA Regional office to assist permit applicants in this regard. Special coordinators for new sources have already been established in each EPA Region and are listed at 44 FR 23308 (April 19, 1979).

The Agency has determined that the best way to consolidate application forms is to combine common elements in a general part and leave program-unique elements to specific parts. The alternative of developing a single form encompassing all programs was rejected as being too unwieldy and potentially confusing.

To ensure that the forms are understandable, the questions and instructions are being drafted to be as concise and clear as possible and to require as brief a response as possible. Different colors will be used in the final forms for each program to help distinguish them.

In addition, the questions and instructions in the general form (Form 1) have been designed to enable an applicant to determine which additional forms are applicable. Further, once Form 5c is developed, applicants will be able to submit preliminary information to EPA and receive formal determinations of whether they are subject to the new source requirements of the PSD and NPDES programs. Of course, if an applicant remains unsure of which programs apply, he or she is encouraged to call, visit or write EPA's Regional representative for assistance.

Today's notice contains drafts of the general form, a RCRA form, two NPDES forms, and all associated instructions. After receipt of public comments, these will be altered if necessary. In addition, these forms must be approved by the Office of Management and Budget before EPA can use them. The forms which have not been included in today's notice will be published as drafts in future Federal Register notices, and incorporated into the consolidated permit application form when final.

II. General Form (Form 1)

This form requires submission of general identification information: name, address, phone number of the applicant (and of the facility, if different) the four Standard Industrial Classification (SIC) codes best describing the principal products of the facility, and the name and telephone number of the facility contact (e.g., plant manager). The type of ownership (Federal, State, private, etc.) must also be described.

In addition to identifying the facility, this form will be used as a guide to determine which specific forms must be completed by the applicant. The applicant is asked, by the use of brief questions requiring "yes" or "no" answers, whether it conducts certain activities, each of which requires a permit. In most cases, a "yes" answer will lead the applicant to the additional specific form necessary to obtain a permit for the activity. The applicant must also list any permits which it presently holds.

Finally, this form requires applicants to submit topographic maps of their facilities extending to at least one mile beyond property boundaries. The maps must show the location of each of the source's intake and discharge points, hazardous waste treatment, storage and disposal sites, and injection wells. These requirements will give an overview of the release of different wastes to the environment by each facility.

The Agency considered asking for other more detailed information in the general form. This could prove useful where more than one program solicits similar information. However, such information is generally not relevant to all of the programs. To avoid soliciting this information from applicants who need not submit it, the Agency decided to request it in the program-specific forms.

III. Hazardous Waste Form (Form 3)

Section 3001 of the Resource Conservation and Recovery act (RCRA) provides authority for determining whether a waste is hazardous and therefore whether it must be managed according to other provisions of RCRA. Regulations implementing this section of RCRA were proposed on December 18, 1978 (43 FR 58954).

Section 3010 of RCRA, requires any person who generates, transports, or owns or operates a facility that threats, stores or disposes of hazardous wastes to notify EPA of such activity within 90 days of promulgation of the section 3001

regulations. Regulations governing this notification were proposed at 43 FR 29908 (July 11, 1978), which require existing Hazardous Waste Management (HWM) facilities to provide the location and general description of their activities and wastes. Because this is a brief document which is not a part of an application for a permit, EPA decided to develop a separate form for notification.

Section 3004 of RCRA, and the implementing regulations which were proposed at 43 FR 58994 (December 18, 1978), address standards for owners and operators of hazardous waste treatment, storage and disposal facilities. These standards define the levels of proposed human health and environmental protection to be achieved by these facilities.

Section 3005 of RCRA requires permits for facilities which treat, store, or dispose of hazardous waste. Regulations to implement this permit program are proposed elsewhere in today's **Federal Register** as part of the consolidated permit program regulations. These regulations provide for three types of permits for HWM facilities: Regular permits, experimental special permits, and health care special permits.

A. *Regular Permits*

The proposed RCRA regulations establish information requirements for applications for regular permits. For administrative convenience, proposed §§ 122.23 (c) and (d) divide these information requirements into two parts (Part A and Part B). The Part A requirements of the regulations will be implemented by Form 1 and Form 3 of the consolidated permit application, while Part B requirements will be satisfied by direct submission of the required information to the permitting authority (no separate form will be developed). Table I describes the schedule for submission of information required to obtain a regular permit.

1. *Part A Requirements (Forms 1 and 3).* Form 1 is discussed in Part II of this preamble. The information required in Form 3 of the permit application focuses on the nature and quantity of hazardous waste handled at the facility, but also includes: (1) Data such as the zoning of the area in which the facility is located and the type of RCRA permit sought; (2) a detailed description of the facility, including available design and operation drawings and specifications for the facility, and its hazardous waste treatment, storage and disposal processes, techniques and equipment; (3) detailed and specific identification, description and quantification of the wastes to be handled at the facility; and (4) the processes or technologies to be applied for the treatment, storage or disposal of hazardous wastes at the facility. These date requirements reflect the intent and content of proposed §§122.23(c)(3–7).

2. *Part B Requirements (No Application Form). The date and information required by Part B information requirements is site and process specific. The Agency decided not to develop a specific form for Part B since the information required is not readily adaptable to a standard format.*

The specific requirements of Part B, which appear as § 122.23(d) in the proposed consolidated permit program regulations elsewhere in today's **Federal Register**, include administrative, hydrological, design and operational data on the facility. When sumitted by an applicant, the specific facility and site data required by Part B will be compared to the standards and criteria required by section 3004 of RCRA (40 CFR 250.40 through 250.46, proposed on December 18, 1978 at 43 FR 58994).

The date requirements of Part B include:

(a) Treatment, storage and disposal data: The facility's structures, operating and maintenance plans, emergency or contingency plans, leachate and other pollution control measures, planned life of operation, closure and post-closure maintenance and uses, programs for monitoring and visual inspections during and after use, plans for segregation of incompatible wastes, and plans for incinerator trial burns at appropriate facilities.

(b) Facility site data: The geology, climate, and hydrology [Within 290 m (100 ft) of the facility boundaries] are required in terms of their possible relation to air and water pollution.

(c) Facility staffing data: Information on expected performance and related training of persons responsible for operation of the HWM facility. This data will help EPA to assess operational and maintenance safety of the facility and the associated risks.

(d) Financial responsibility data: Data which supplies evidence of continued financial responsibility, such as performance bonds, insurance carriers/policies, trusts, escrow accounts or other instruments.

These data are usually needed to determine the human health, environmental and economic risk associated with the decision to issue or deny a permit. However, proposed §122.23(d)(7) allows that, on written request and justification from the applicant, any of the information requirements in Part B may be waived if the Director determines that this information is not needed to establish compliance with standards in proposed §§ 250.42–250.46.

B. *Experimental Special Permits*

Owners or operators of experimental facilities which are intended to advance the state of the art for hazardous waste treatment, storage or disposal may seek one-year experimental special permits. These permits may be extended up to one additional year.

Applicants must submit Part A requirements (Forms 1 and 3) and Part B requirements according to the schedule in Table 1. However, certain items may not be relevant. In these cases, certain Part B requirements may be waived.

C. *Health Care special Permits*

Owners or operators of health care facilities that treat or store hazardous waste may apply for health care special permits.

To qualify for this special permit, the following conditions must be met:

(1) The facility must be licensed under a State law that requires compliance with requirements for storage, sterilization, incineration, or treatment of all hazardous waste generated.

(2) The State law must provide for the enforcement of the requirements of the licensing program.

(3) If an incinerator is used, it must be operated under the terms and conditions of a license under applicable State law.

(4) The facility must submit a certification statement indicating compliance with an issued license signed by the appropriate State licensing official.

Applicants for these permits need not submit Part B information. They are also exempt from certain items in Form 3, as described in the instructions.

D. *Interim Status*

The preparation and review of permit applications are expected to take a substantial period of time. Therefore, HMM facilities which were in operation or under physical construction prior to the date of promlugation of section 3001 regulations are eligible for interim status. To qualify for this status, the facility must fulfill the notification requirements of section 3010, and submit Forms 1 and 3 of the consolidated permit application no later than 180 days from the date of promulgation of section 3001 requlations.

Under interim status, the facilities will be treated as having been issued valid permits, thus allowing their continued operation until required to complete the application process by filing Part B information and a final permit is issued. Facilities granted interim status are subject to certain minimum criteria

under section 3004 of RCRA. See proposed 40 CFR 260.40 (43 FR 58946, December 18, 1978). Facilities which do not meet the above conditions (e.g., new facilities) must submit both Part A (Forms 1 and 3) and Part B information prior to permit issuance.

Table I summarizes the types of permits for which applications must be made, the type of forms to be used and the date by which application must be submitted.

Table I.—*Summary of RCRA § 3005 Application Requirements*

Permit for which application is submitted	Type of applicant	Deadline for submission of part A (forms 1 and 3)	Deadline for submission of part B (no form provided)
Regular RCRA Permit (Interim Status)	Owner/operator of Existing HWM Facility	A	B
Regular RCRA Permit	Owner/operator of New HWM Facility	C	C
Experimental Special Permit (Interim Status)	Owner/operator of Existing HWM Facility	A	B
Experimental Special Permit	Owner/operator of New HWM Facility	C	C
Health Care Special Permit (Interim Status)	Owner/operator of Existing HWM Facility	A	Not required.
Health Care Special Permit	Owner/operator of New HWM Facility	C	Not required.

A: No later than 180 days after final promulgation of regulations under section 3001 of RCRA.
B: As required by the Director (upon at least six months notice to the applicant).
C: No later than 180 days before physical construction is expected to begin.

E. *Impacts of RCRA Application Reporting Requirements.*—The requirement to obtain a RCRA permit is expected to place an economic and workload burden on approximately 30,000 owners or operators of regulated HWM facilities. The impact on applicants who must complete Form 3 is summarized in Table II. The estimates are considered to be overstated because several States already required submission of some of the same information in their State operated permit programs. In addition, some of the same information necessary for completion of the form may be available through such sources as the Department of Transportation shipping documents which depict the waste, and responsible companies that maintain daily operating logs.

Table II.—*Summary of Form 3 Impact*

	Storage	Treatment and disposal		Health care
		Onsite*	Offsite*	
Number of respondents	17,000	4,500	1,200	7,000
Frequency of response	Once	Once	Once	Once
Cost in work hours	2	27	5	1
Cost in dollars**	$44	$600	$110	$22

*Onsite means on the same or geographically contiguous property; offsite means *not* on the same property.
**Based on $22/hr.

The impacts of Part B requirements are addressed on page 95 of the Draft Subtitle C Economic Impact Analysis. Copies of this document can be obtained by writing Ed Cox, Solid Waste Information Office, Environmental Protection Agency, 26 West St. Clair Street, Cincinnati, Ohio 42560, telephone (513) 684–8491. In addition, copies of this document are available for review in the EPA Library Reading Room, 2404, Waterside Mall, 401 M St., SW., Washington, D.C. 20460, and in the EPA Regional office libraries.

IV. NPDES Forms (Forms 2b and 2c)

All applicants for EPA-issued NPDES permits must submit the general section (Form 1) plus the applicable specific section (Form 2a, 2b, 2c, or 5) of the consolidated application form. Applicants for State-issued permits must use State application forms, unless the State has adopted EPA's form without change.

Only the forms for existing industrial dischargers (Form 2c) and concentrated animal feeding operations and aquatic animal production facilities (Form 2b) are included in this notice. The Agency is also developing application forms for new sources and new dischargers (Form 5) and for publicy owned treatment workd (Form 2a). It is expected that many of the considerations addressed in developing the form for existing industrial sources will also be relevant to those forms.

State application forms are not required to be identical to the EPA form, but they are subject to EPA approval prior to use (see the definition of "application" in 40 CFR 122.3 and the requirement of EPA approval in 40 CFR 123.73). To ensure consistency of approach, EPA has today proposed elsewhere in the Federal Register (§ 122.64(d)) minimum requirements for applications for NPDES permits, which would apply even where States use forms other than the EPA form. Of course, States are welcome to use EPA's format, substituting the State's name, address and logo, for EPA's.

Applicants should continue to use existing permit NPDES application forms until revised forms are made available.

The Agency is proposing elsewhere in today's issue of the Federal Register a set of conforming regulations for the NPDES program which establish the framework for the control of pollutants in general and section 307(a) toxic pollutants in particular through a strategy of application reporting and permitting. These regulations are preceded by a detailed preamble which explains the entire strategy. Included in that preamble is a discussion of how the application reporting requirements fit into the overall strategy, including an anaylsis of the basis for each requirement. That discussion will not be repeated here. However, the permit application requirements for existing industrial dischargers may be summarized as follows:

1. Applicants must report discharge levels of pollutants which have traditionally been of concern in the NPDES permit program.

2. Applicants must also report discharge levels of the 129 toxic pollutants listed under section 307(a) of the Clear. Water Act (this list is an elaboration upon, but contains no addition to, the list of 65 toxic pollutants contained in the *NRDC Consent Decree* and referred to in section 301(b)(2)(C) of the Clean Water Act). For process wastewater streams discharged by sources in 36 industries, this reporting must be based on analyses conducted by using gas chromatography/mass

spectrometry (GC/MS) analytical techniques for most of the 115 organic chemicals on the toxics list. This analysis will be performed upon composite samples of the applicant's waste stream which have been collected over a 72-hour period. For non-process wastewater streams and sources in other industries, estimates will be accepted.

3. Applicants must describe the variability of the levels of pollutants that may be expected to occur during the term of the permit. Examples include batch process discharges and predictable changes in raw materials usage (e.g., a change by a coal-fired steam electric generating plant from one source of coal to another).

4. At their option, applicants may submit information on expected discharges of hazardous substances as defined under section 311 of the Clean Water Act. As described in proposed 40 CFR 117.12(b) (44 FR 10271, February 16, 1979), applicants who state that they expect to discharge pollutants in certain quantities and concentrations and show that adequate treatment equipment or management practices are or will be in place to control those discharges are eligible for exemption of those discharges from the requirements and penalties of section 311.

It should be noted that the Agency has made efforts to minimize reporting burdens upon applicants. Of course, reporting burdens are increased in some areas as a result of the increased emphasis on toxics required by the 1977 amendments to the Clean Water Act (see the background discussion in the preamble to the proposed conforming NPDES regulations elsewhere in today's **Federal Register**). However, certain requirements imposed by the expiring NPDES application form have been deleted, including the following:

1. Certain pollutants no longer must be reported (e.g., specific conductance, potassium, and settleable matter).

2. Applicants are no longer required to sample and analyze pollutants in their intake water. However, they must do so if they intend to seek credit for pollutants in their intake as provide by 40 CFR 122.70(g).

3. Applicants are no longer required to provide information on the raw materials used and the types and quantities of products produced, unless an applicable effluent guideline employs limits based on production, raw materials, or some other measure of operation. Where such guideline limits apply, the total amount of product produced or raw material used must be reported in order for the permit writer to apply the guideline.

Applicants are reminded that all information contained in an application for an NPDES permit is available to the public as required by section 401(j) of the Clean Water Act. In order to minimize collection of data which could compromise trade secrets, the Agency is requesting only end-of-pipe effluent data. If a permit writer determines, after reviewing an application, that other waste stream information (such as sensitive data concerning upstream process discharges) is required in a particular case, he or she will generally do so under section 308 of the Clean Water Act or equivalent State authority. The rules governing claims of confidentiality are contained in 40 CFR Part 2.

The economic and reporting impacts of these NPDES forms are discussed elsewhere in this issue of the **Federal Register** as part of the preamble to the proposed NPDES regulations implementing these NPDES application forms.

Comments: Comments are solicited on the layout of each form and on the clarity of all questions and instructions. Comments are also requested on EPA's approach towards consolidating its permit application forms, and suggestions are invited on ways to further reduce duplicative reporting of information.

Dated: June 4, 1979.

Douglas M. Costle,

Administrator.

Consolidated Permit Application Form

Form 1—General Information
Form 2—Discharges to Surface Water (NPDES Permits)
a. Publicly Owned Treatment Works [Reserved]
b. Concentrated Animal Feeding Operations and Aquatic Animal Production Facilities
c. Existing Manufacturing, Commercial, Mining, and Silvicultural Operations
Form 3—Hazardous Wastes Information Summary (RCRA Permits)
Form 4—Underground Injection of Fluids (UIC Permits) [Reserved]
Form 5—Proposed Facilities*
a. Compliance with Other Environmental Laws [Reserved]
b. Application for PSD and NPDES Permits [Reserved]
c. New Source Applicability Questionnaire (PSD and NPDES) [Reserved]

BILLING CODE 6560-01-M

* PSD new sources, NPDES new sources and new discharges, and new injection wells.

Please print or type (with an ELITE typewriter) in the shaded area only.

Form Approved
OMB No. 158–R00XX

FORM 1 GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Refer to instructions for legal authorizations.)

ITEMS	AFFIX LABEL BELOW
II. FACILITY I.D. NO.	DRAFT
III. FACILITY NAME	PLEASE PLACE LABEL IN THIS SPACE
V. MAILING ADDRESS	
VI. FACILITY LOCATION	
VII. SIC CODES	

GENERAL: If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate shaded area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill–in area below. If the label is complete and correct, you need not complete Items II, III, V, VI, and VII. Complete all items if no label has been provided.

I. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete questions A through J to determine whether you need to file any permit forms. If you answer no to every question, you are not required to submit any of these forms. If you answer yes to any of these questions, refer to the instructions before proceeding. Each of the terms in questions A through J printed in bold face type has a certain meaning; refer to the glossary in Section D of the instructions for definitions.

SPECIFIC QUESTIONS	MARK 'X' YES	MARK 'X' NO
A. Is the facility a **publicly owned treatment works** which results in a discharge to waters of the U.S.? (16)		
B. Does this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a discharge to waters of the U.S.? (18)		
C. Are there any operations now existing at the facility which result in a discharge to waters of the U.S. other than those described in A or B above? (20)		
D. Is this a proposed operation *(other than those described in A or B above)* which will result in a discharge to waters of the U.S.? (22)		
E. Do you own or operate a facility that treats, stores, or disposes of **hazardous wastes**? (24)		
F. Do you inject or propose to inject industrial, municipal or nuclear effluent below underground sources of drinking water? (26)		
G. Do you inject or propose to inject any fluids related to oil and gas production, such as enhanced recovery, salt water disposal, or hydrocarbon storage? (28)		
H. Do you inject or propose to inject fluids for special process operations such as solution mining of minerals, in situ gasification of oil, shale, coal, etc., or the recovery of geothermal energy? (30)		
I. Is the facility a proposed **stationary source** in one of the 28 industrial categories listed in the instructions to this question that will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act, and its emissions may affect or be located in an **attainment area**? (32)		
J. Is the facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions to this question, will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act, and its emissions may affect or be located in an **attainment area**? (34)		

ADDITIONAL FORMS: You can obtain additional forms by calling or writing your EPA's Regional office *(see Table 1 of the instructions)*.

II. FACILITY I.D. NUMBER

C F 1 (1–2) (3–15)

III. NAME OF FACILITY

C (16–45)

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & job title)*	B. PHONE *(area code & no.)*
C 2 (15–45)	(46–57)

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX	B. CITY OR TOWN	C. STATE	D. ZIP CODE
C 3 (15–45)	C 4 (16–45)	(47–48)	(49–57)

VI. FACILITY LOCATION

A. STREET OR ROUTE NUMBER	B. CITY OR TOWN	C. STATE	D. ZIP CODE
C 5 (15–45)	C 6 (16–45)	(47–48)	(49–57)

VII. SIC CODES *(4–digit, in order of priority)*

A. FIRST	C. THIRD
C 7 (15–16) (17–19) (specify)	C 7 (15–16) (17–19) (specify)
B. SECOND	**D. FOURTH**
C 7 (15–16) (17–19) (specify)	C 7 (15–16) (17–19) (specify)

Form Approved
OMB No. 158–R00XX

Continued from the front.

VIII. OWNER INFORMATION

A. NAME

B

B. TYPE OF OWNERSHIP (Enter the appropriate letter into the answer box; if 'Other', specify.)

F=FEDERAL M=PUBLIC (other than federal or state)
S=STATE I=INDIAN LAND
P=PRIVATE O=OTHER (specify)

(specify)

C. PHONE (area code & no.)

A

D. STREET OR P.O. BOX

E. CITY OR TOWN

F. STATE

G. ZIP CODE

B

IX. EXISTING ENVIRONMENTAL PERMIT NUMBERS

A. NPDES (Discharges to Surface Water)

N

D. PSD (Air Emissions from Proposed Sources)

P

B. UIC (Underground Injection of Fluids)

U

E. OTHER (specify)

(specify)

C. RCRA (Hazardous Wastes)

R

F. OTHER (specify)

(specify)

X. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property bounderies. The map must show the outline of the facility, the location of each of your existing and proposed intake and discharge structures, each of your hazardous waste treatment, storage, or disposal facilities, and each well where you inject fluids underground. Include all springs, rivers, and all other surface water bodies in the map area. See the instructions for precise requirements.

XI. NATURE OF BUSINESS (provide a brief description)

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XII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)

B. SIGNATURE

C. DATE SIGNED

COMMENTS FOR OFFICIAL USE ONLY

C

FORM 2a - NPDES: PUBLICLY OWNED TREATMENT WORKS

[Reserved. Until a new form and accompanying instructions are developed all applicants should continue to use the existing form, OMB No. 158-R0100, standard Form A.]

Please print or type in the shaded area only.

Form Approved OMB No. 158–R00XX

FORM 2B NPDES

U.S. ENVIRONMENTAL PROTECTION AGENCY

APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER

CONCENTRATED ANIMAL FEEDING OPERATIONS AND AQUATIC ANIMAL PRODUCTION FACILITIES

Consolidated Permits Program

FACILITY I.D. NUMBER

I. GENERAL INFORMATION

A. TYPE OF BUSINESS	B. LEGAL DESCRIPTION OF FACILITY LOCATION		C. FACILITY OPERATING STATUS
☐ 1. CONCENTRATED ANIMAL FEEDING OPERATION *(complete questions B,C, and Item II)*	1. QUARTER	2. SECTION	☐ 1. EXISTING FACILITY
☐ 2. CONCENTRATED AQUATIC ANIMAL PRODUCTION FACILITY *complete questions B,C, and Item III)*	3. TOWNSHIP	4. RANGE	☐ 2. PROPOSED FACILITY

II. CONCENTRATED ANIMAL FEEDING OPERATION CHARACTERISTICS

A. TYPE & NUMBER OF ANIMALS IN OPEN CONFINEMENT & HOUSED UNDER ROOF			B. NO. OF ACRES FOR CONFINEMENT FEEDING & AVAILABLE FOR MANURE DISPOSAL
1. TYPE	2. NO. IN OPEN CONFINEMENT	3. NO. HOUSED UNDER ROOF	1. CONFINEMENT FEEDING
			2. MANURE DISPOSAL

C. If there is open confinement, has a runoff diversion and control system been constructed? ☐ YES *(complete questions 1, 2, & 3 below)* ☐ NO *(go to Item IV)*

1. What is the design basis for the control system?

☐ a. 10 YEAR, 24-HOUR STORM — INCHES | ☐ b. 25 YEAR, 24-HOUR STORM — INCHES | ☐ c. OTHER, *(specify)* — INCHES

2. Report the number of acres of contributing drainage. — ACRES

3. Report the design safety factor. — SAFETY FACTOR

III. CONCENTRATED AQUATIC ANIMAL PRODUCTION FACILITY CHARACTERISTICS

A. For each outfall, give the maximum daily flow, maximum monthly flow, and average monthly flow.

1. OUTFALL NO.	2. FLOW *(gallons per day)* a. MAXIMUM DAILY	b. MAXIMUM MONTHLY	c. AVERAGE YEARLY

B. Indicate the total number of ponds, raceways, and similar structures in your facility.

1. PONDS	2. RACEWAYS	3. OTHER

C. Provide the name of the receiving water and the source of water used by your facility.

1. RECEIVING WATER	2. WATER SOURCE

D. List the species of fish or aquatic animals held and fed at your facility. For each species, give the total weight produced by your facility per year in pounds of harvestable weight, and also give the maximum weight present at any one time.

1. COLD WATER SPECIES			2. WARM WATER SPECIES		
a. SPECIES	b. HARVESTABLE WEIGHT *(pounds)* (1) TOTAL YEARLY	(2) MAXIMUM	a. SPECIES	b. HARVESTABLE WEIGHT *(pounds)* (1) TOTAL YEARLY	(2) MAXIMUM

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E. Report the total pounds of food fed during the calendar month of maximum feeding.

1. MONTH	2. POUNDS OF FOOD

IV. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print of type)*	B. SIGNATURE	C. DATE SIGNED

EPA Form 5678–X (Y–79)

Please print or type in the shaded area only.

FACILITY I.D. NUMBER

Form Approved
OMB No. 158–XXX

FORM 2C NPDES

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURAL OPERATIONS
Consolidated Permits Program

I. PRINCIPAL PRODUCTS PRODUCED

A. Does a production–based effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐ YES *(go to Question I–B)* ☐ NO *(go to Question II)*

B. If you answered 'Yes' to Question I–A, list the average and maximum quantities of the principal products that you actually produce per operating day *(for industries where an applicable effluent guideline is expressed in terms of raw materials or some other measure of your operation, list the raw materials or other measure of production)*. The figures provided must reflect a reasonable measure of actual production or consumption which is representative of the levels of activity expected over the next five years.

1. PRODUCT OR MATERIAL	2. QUANTITY PER DAY		
	a. MAXIMUM	b. AVERAGE	c. UNITS

II. LINE DRAWING

Attach a line drawing showing the water flow through the facility. Indicate each source of intake water, each major process, operation or area of production contributing to each discharge, and each treatment unit in place. Construct a water balance on the line drawing by indicating average flows of each point of intake and discharge, and indicate water losses to process or to atmosphere.

III. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. For each outfall, indicate in mgd *(million gallons per day)* the average and maximum flow contributed by type of wastewater. Use your best estimate if no measurements are available. List all outfalls and attach additional sheets if necessary.

1. OUTFALL NUMBER *(list)*		2. FLOW *(in mgd)*				
		a. SANITARY WASTE	b. NONCONTACT COOLING WATER	c. STORM RUNOFF	d. PROCESS WASTE WATER	e. OTHER *(specify)*
	AVG					
	MAX					
	AVG					
	MAX					
	AVG					
	MAX					
	AVG					
	MAX					
	AVG					
	MAX					
	AVG					
	MAX					
	AVG					
	MAX					
	AVG					
	MAX					

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Section III continued from the front.

B. Complete the following table for each source of toxic pollutants or hazardous substances which is or may be discharged to waters of the United States by any means except an outfall as a result of any of the following: (1) Plant site runoff; (2) spillage or leaks; (3) sludge or waste disposal; (4) materials storage and handling; or (5) loading and unloading areas.

1. SOURCE OF DISCHARGE (specify)	2. ESTIMATED FLOW (mgd)		3. RECEIVING WATER	4. TOXIC OR HAZARDOUS POLLUTANTS (list)	5. ESTIMATED CONCENTRATION		
	a. AVERAGE	b. MAXIMUM			a. AVERAGE	b. MAXIMUM	c. UNITS

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C. Attach a copy of your Best Management Practices Program for controlling the above discharges.

☐ COPY ATTACHED ☐ COPY NOT ATTACHED (explain below)

D. Except for storm runoff, are any of the discharges described in Questions III–A or III–B noncontinuous?

☐ YES (complete the following table) ☐ NO (go to Question III–E)

1. OUTFALL OR SOURCE OF DISCHARGE (specify)	2. NO. OF DAYS/WEEK DISCHARGE OCCURS (specify average)	3. MONTHS IN WHICH DISCHARGE OCCURS (list)	4. VOLUME/OCCURRENCE (millions of gallons)	
			a. AVERAGE	b. MAXIMUM

Continued from page 2.

FACILITY I D NUMBER

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B. For each outfall, describe which processes or operations contribute wastewater to the effluent and what treatment the resulting effluent receives. Attach additional sheets if necessary.

1. OUTFALL NO.	2. PROCESS OR OPERATION *(specify)*	3. TREATMENT *(specify)*

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IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices? This includes, but is not limited to, permit conditions, administrative or enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES *(complete the following table)* ☐ NO *(go to Question IV–B)*

1. IDENTIFICATION OF CONDITION, ORDER, AGREEMENT, ETC	2. OUTFALL OR NONPOINT SOURCE AFFECTED	3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
			a. REQUIRED	b. PROJECTED

B. Attach additional sheets describing any additional water pollution control programs *(or other environmental projects which may affect your discharge)* you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ Mark 'X' if description of additional control programs is attached.

V. INTAKE AND EFFLUENT CHARACTERISTICS

See instructions before proceeding – Complete one table for each outfall – Annotate the outfall number in the space provided. Except for Part V–C, pollutant levels reported in this question must be based upon actual analyses conducted in accordance with the methods specified in the instructions, and may not be based upon estimates or conjecture. Column (1) in each table must be completed only if you are requesting credit for pollutants present in your intake water *(see instructions)*. **NOTE:** Tables V–A, V–B, and V–C are included on a separate sheet *(oversized sheet)*.

Continued from the front.

VI. VARIABILITY

A. Are your operations such that your raw materials, processes, and/or products can reasonably be expected to vary so that future concentrations of pollutants from each outfall may exceed five times the average values reported in Question V?

☐ YES *(complete Questions VI–B & VI–C)* ☐ NO *(go to Question VII)*

B. If you answered 'Yes' to Question VI–A, describe the reasons that the concentrations of pollutants can be expected to significantly vary from the levels reported in Question V, for each outfall where you expect such variations to occur.

C. If you answered 'Yes' to Question VI–A, describe in detail the range of levels of pollutants which you anticipate will be discharged from each outfall over the next five years, to the best of your ability at this time. Attach additional sheets if necessary.

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VII. BIOMONITORING DATA

A. Do you have any knowledge or reason to believe that biological monitoring tests for acute and/or chronic toxicity have been made on any of your discharges or on a receiving water in relation to your discharge within the last five years?

☐ YES *(go to Question VII–B)* ☐ NO *(go to Question VIII)*

B. If 'Yes' to Question VII–A, please identify the test and describe the results; and specify at which outfall or receiving water the tests were conducted.

VIII. DATA ON POLLUTANTS NOT REPORTED ELSEWHERE ON THIS FORM

Do you know of any analytical data collected within the last five years on the presence or levels of pollutants in your effluents in addition to those pollutants reported in Questions III–B or V?

☐ YES *(briefly describe this information below)* ☐ NO *(go to Question IX)*

FACILITY I D NUMBER

Form Approved
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Continued from page 4.

IX. DISCHARGES OF HAZARDOUS SUBSTANCES *(OPTIONAL)*

NOTE: Discharges identified under this Question may be eligible for exemption from the requirements and penalties of Section 311 of the Clean Water Act. See instructions.

A. Identify and describe any hazardous substance listed under Section 311 of the Clean Water Act which you discharge or may discharge in the future.

1. POINT OF DISCHARGE	2. HAZARDOUS SUBSTANCE	3. ORIGIN OR CAUSE OF DISCHARGE	4. FREQUENCY OF OCCURRENCE	5. CONCENTRATION			6. AMOUNT	7. ANALYTICAL METHOD OR BASIS OF ESTIMATION
				a. AVERAGE	b. MAXIMUM	c. UNITS		

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CONTINUE ON REVERSE

Section IX continued from the front.

B. List any treatment methods or management practices which are or will be used to control each discharge listed in (A) on the reverse. Attach additional sheets if necessary.

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X. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in this application performed by a contract laboratory or consulting firm?

☐ YES (List the name, address, & telephone number of each laboratory or firm below.) ☐ NO (go to Question XI)

A. NAME	B. ADDRESS	C. TELEPHONE

XI. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED

Please print or type in the shaded area only.

Form Approved OMB No. 158-R0081

V. INTAKE AND EFFLUENT CHARACTERISTICS (Continued from page 3 of Form 2C)

FACILITY I.D. NUMBER

OUTFALL NUMBER

PART A – This table must be completed by all applicants for each outfall. Please refer to the instructions.

PARAMETER AND CAS NUMBER (if available)	UNITS	TREATED INTAKE AVERAGE OBSERVED VALUE (1)	EFFLUENT AVERAGE OBSERVED VALUE (2)	EFFLUENT MAXIMUM OBSERVED VALUE (3)	NO. OF ANALYSES (4)	SAMPLE TYPE (5)
FLOW	MGD					
BIOCHEMICAL OXYGEN DEMAND (BOD$_5$)	MG/L					
CHEMICAL OXYGEN DEMAND (COD)	MG/L					
pH	STAND. UNITS	XXXXXX	XXXXXX	MIN MAX		
TOTAL SUSPENDED SOLIDS (TSS)	MG/L					
TEMPERATURE (Winter)	C					

PARAMETER AND CAS NUMBER (if available)	UNITS	TREATED INTAKE AVERAGE OBSERVED VALUE (1)	EFFLUENT AVERAGE OBSERVED VALUE (2)	EFFLUENT MAXIMUM OBSERVED VALUE (3)	NO. OF ANALYSES (4)	SAMPLE TYPE (5)
TEMPERATURE (Summer)	°C					
TOTAL KJELDAHL NITROGEN (TKN) AS N	MG/L					
TOTAL ORGANIC CARBON (TOC)	MG/L					
CYANIDE, TOTAL (57-12-5)	MG/L					
PHENOLS, TOTAL (4AAP)	MG/L					

PART B – This table must be completed by all applicants in Group I industries (see instructions) for all outfalls which contain process wastewater.

PARAMETER AND CAS NUMBER	UNITS	TREATED INTAKE AVERAGE OBSERVED VALUE (1)	EFFLUENT AVERAGE OBSERVED VALUE (2)	EFFLUENT MAXIMUM OBSERVED VALUE (3)	NO. OF ANALYSES (4)	SAMPLE TYPE (5)
FLOW	MGD					
9. ACENAPHTHENE (83-32-9)	µG/L					
2. ACROLEIN (107-02-8)	µG/L					
3. ACRYLONITRILE (107-13-1)	µG/L					
4. BENZENE (71-43-2)	µG/L					
5. BENZIDINE (92-87-5)	µG/L					
6. CARBON TETRACHLORIDE (56-23-5)	µG/L					
7. CHLOROBENZENE (108-90-7)	µG/L					
8. 1,2,4-TRICHLOROBENZENE (120-82-1)	µG/L					
9. HEXACHLOROBENZENE (118-74-1)	µG/L					
10. 1,2-DICHLOROETHANE (107-06-2)	µG/L					
11. 1,1,1-TRICHLOROETHANE (71-55-6)	µG/L					
12. HEXACHLOROETHANE (67-72-1)	µG/L					
13. 1,1-DICHLOROETHANE (75-34-3)	µG/L					
14. 1,1,2-TRICHLOROETHANE (79-00-5)	µG/L					
15. 1,1,2,2-TETRACHLOROETHANE (79-34-5)	µG/L					
16. CHLOROETHANE (75-00-3)	µG/L					
17. BIS (CHLOROMETHYL) ETHER (542-88-1)	µG/L					
18. BIS (2-CHLOROETHYL) ETHER (111-44-4)	µG/L					
19. 2-CHLOROETHYL VINYL ETHER (110-75-8)	µG/L					
20. 2-CHLORONAPHTHALENE (91-58-7)	µG/L					
21. 2,4,6-TRICHLOROPHENOL (88-06-2)	µG/L					
22. PARA-CHLORO-META-CRESOL (59-50-7)	µG/L					
23. CHLOROFORM (67-66-3)	µG/L					
24. 2-CHLOROPHENOL (95-57-8)	µG/L					
25. 1,2-DICHLOROBENZENE (95-50-1)	µG/L					
26. 1,3-DICHLOROBENZENE (541-73-1)	µG/L					
27. 1,4-DICHLOROBENZENE (106-46-7)	µG/L					
28. 3,3-DICHLOROBENZIDINE (91-94-1)	µG/L					
29. 1,1-DICHLOROETHYLENE (75-35-4)	µG/L					
30. 1,2-TRANS-DICHLOROETHYLENE (156-60-5)	µG/L					
31. 2,4-DICHLOROPHENOL (120-83-2)	µG/L					
32. 1,2-DICHLOROPROPANE (78-87-5)	µG/L					
33. 1,3-DICHLOROPROPYLENE (542-75-6)	µG/L					
34. 2,4-DIMETHYLPHENOL (105-67-9)	µG/L					
35. 2,4-DINITROTOLUENE (121-14-2)	µG/L					
36. 2,6-DINITROTOLUENE (606-20-2)	µG/L					

PARAMETER AND CAS NUMBER	UNITS	TREATED INTAKE AVERAGE OBSERVED VALUE (1)	EFFLUENT AVERAGE OBSERVED VALUE (2)	EFFLUENT MAXIMUM OBSERVED VALUE (3)	NO. OF ANALYSES (4)	SAMPLE TYPE (5)
37. 1,2-DIPHENYLHYDRAZINE (122-66-7)	µG/L					
38. ETHYLBENZENE (100-41-4)	µG/L					
39. FLUORANTHENE (206-44-0)	µG/L					
40. 4-CHLOROPHENYL ETHER (7005-72-3)	µG/L					
41. 4-BROMOPHENYL PHENYL ETHER (101-55-3)	µG/L					
42. BIS (2-CHLOROISOPROPYL) ETHER (39638-32-9)	µG/L					
43. BIS (2-CHLOROETHOXY) METHANE (111-91-1)	µG/L					
44. METHYLENE CHLORIDE (75-09-2)	µG/L					
45. METHYL CHLORIDE (74-87-3)	µG/L					
46. METHYL BROMIDE (74-83-9)	µG/L					
47. BROMOFORM (75-25-2)	µG/L					
48. DICHLOROBROMOMETHANE (75-27-4)	µG/L					
49. TRICHLOROFLUOROMETHANE (75-69-4)	µG/L					
50. DICHLORODIFLUOROMETHANE (75-71-8)	µG/L					
51. CHLORODIBROMOMETHANE (124-48-1)	µG/L					
52. HEXACHLOROBUTADIENE (87-68-3)	µG/L					
53. HEXACHLOROCYCLOPENTADIENE (77-47-4)	µG/L					
54. ISOPHORONE (78-59-1)	µG/L					
55. NAPHTHALENE (91-20-3)	µG/L					
56. NITROBENZENE (98-95-3)	µG/L					
57. 2-NITROPHENOL (88-75-5)	µG/L					
58. 4-NITROPHENOL (100-02-7)	µG/L					
59. 2,4-DINITROPHENOL (51-28-5)	µG/L					
60. 4,6-DINITRO-O-CRESOL (534-52-1)	µG/L					
61. N-NITROSODIMETHYLAMINE (62-75-9)	µG/L					
62. N-NITROSODIPHENYLAMINE (86-30-6)	µG/L					
63. N-NITROSODI-N-PROPYLAMINE (621-64-7)	µG/L					
64. PENTACHLOROPHENOL (87-86-5)	µG/L					
65. PHENOL (108-95-2)	µG/L					
66. BIS (2-ETHYLHEXYL) PHTHALATE (117-81-7)	µG/L					
67. BUTYL BENZYL PHTHALATE (85-68-7)	µG/L					
68. DI-N-BUTYL PHTHALATE (84-74-2)	µG/L					
69. DI-N-OCTYL PHTHALATE (117-84-0)	µG/L					
70. DIETHYL PHTHALATE (84-66-2)	µG/L					
71. DIMETHYL PHTHALATE (131-11-3)	µG/L					
72. BENZO(a) ANTHRACENE (56-55-3)	µG/L					
73. BENZO(a) PYRENE (50-32-8)	µG/L					

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PART B - Continued from the front.

PARAMETER AND CAS NUMBER	UNITS	TREATED INTAKE AVERAGE OBSERVED VALUE (1)	EFFLUENT AVERAGE OBSERVED VALUE (2)	EFFLUENT MAXIMUM OBSERVED VALUE (3)	EFFLUENT NO. OF ANALYSES (4)	EFFLUENT SAMPLE TYPE (5)
78. 1,2-BENZO-FLUORANTHENE 205-99-2	µG/L					
79. BENZO(K) FLUORANTHENE 207-08-9	µG/L					
80. CHRYSENE 218-01-9	µG/L					
81. ACENAPHTHYLENE 208-96-8	µG/L					
82. ANTHRACENE 120-12-7	µG/L					
83. BENZO(G,H,I) PERYLENE 191-24-2	µG/L					
84. FLUORENE 86-73-7	µG/L					
85. PHENANTHRENE 85-01-8	µG/L					
86. DIBENZO(A,H) ANTHRACENE 53-70-3	µG/L					
87. INDENO (1,2,3-CD) PYRENE 193-39-5	µG/L					
88. PYRENE 129-00-0	µG/L					
89. TETRACHLORO-ETHYLENE 127-18-4	µG/L					
90. TOLUENE 108-88-3	µG/L					
91. TRICHLORO-ETHYLENE 79-01-6	µG/L					
92. VINYL CHLORIDE 75-01-4	µG/L					
93. ALDRIN 309-00-2	µG/L					
94. DIELDRIN 60-57-1	µG/L					
95. CHLORDANE 57-74-9	µG/L					
96. 4,4'-DDT 50-29-3	µG/L					
97. 4,4'-DDE 72-55-9	µG/L					
98. 4,4'-DDD 72-54-8	µG/L					
99. α-ENDOSULFAN-ALPHA 115-29-7	µG/L					
100. β-ENDOSULFAN-BETA 115-29-7	µG/L					
101. ENDOSULFAN SULFATE 1031-07-8	µG/L					
102. ENDRIN 72-20-8	µG/L					
103. ENDRIN ALDEHYDE 7421-93-4	µG/L					

PARAMETER AND CAS NUMBER	UNITS	TREATED INTAKE AVERAGE OBSERVED VALUE (1)	EFFLUENT AVERAGE OBSERVED VALUE (2)	EFFLUENT MAXIMUM OBSERVED VALUE (3)	EFFLUENT NO. OF ANALYSES (4)	EFFLUENT SAMPLE TYPE (5)
104. HEPTACHLOR 76-44-8	µG/L					
105. HEPTACHLOR EPOXIDE 1024-57-3	µG/L					
106. α-BHC-ALPHA 319-84-6	µG/L					
107. β-BHC-BETA 319-85-7	µG/L					
108. γ-BHC (Lindane)-GAMMA 58-89-9	µG/L					
109. δ-BHC-DELTA 319-86-8	µG/L					
110. PCB-1242 (53469-21-9)	µG/L					
111. PCB-1254 (11097-69-1)	µG/L					
112. PCB-1221 (11104-28-2)	µG/L					
113. PCB-1232 (11141-16-5)	µG/L					
114. PCB-1248 (12672-29-6)	µG/L					
115. PCB-1260 (11096-82-5)	µG/L					
116. PCB-1016 (12674-11-2)	µG/L					
117. TOXAPHENE 8001-35-2	µG/L					
118. ANTIMONY (total) 7440-36-0	MG/L					
119. ARSENIC (total) 7440-38-2	MG/L					
120. BERYLLIUM (total) 7440-41-7	MG/L					
121. CADMIUM (total) 7440-43-9	MG/L					
122. CHROMIUM (total) 7440-47-3	MG/L					
123. COPPER (total) 7440-50-8	MG/L					
124. LEAD (total) 7439-92-1	MG/L					
125. MERCURY (total) 7439-97-6	MG/L					
126. NICKEL (total) 7440-02-0	MG/L					
127. SELENIUM (total) 7782-49-2	MG/L					
128. SILVER (total) 7440-22-4	MG/L					
	MG/L					
	MG/L					

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PART C - This table must be completed by all applicants for each outfall, based on either actual analyses or your best estimate. Fill out columns 1, 2, & 3 only if you mark "present". Please refer to the instructions.

PARAMETER AND CAS NUMBER (if available)	UNITS	MARK 'X' PRESENT	MARK 'X' ABSENT	MARK 'X' ANALYSIS KNOWN	MARK 'X' ESTIMATE	TREATED INTAKE AVERAGE VALUE (1)	EFFLUENT AVERAGE VALUE (2)	EFFLUENT MAXIMUM VALUE (3)
AMMONIA (as N) 7664-41-7	MG/L							
ASBESTOS 1332-21-4	(specify units)							
BROMIDE 24959-67-9	MG/L							
CHLORINE, TOTAL RESIDUAL	MG/L							
COLOR (specify units)								
FECAL COLIFORM	NO. PER 100ML							
FLUORIDE 16984-48-8	MG/L							
NITRATE (as N) 14797-55-8	MG/L							
NITRITE (as N) 14797-65-0	MG/L							
OIL & GREASE	MG/L							
PHOSPHORUS (as P), TOTAL 7723-14-0	MG/L							
RADIOACTIVITY	pCi/L							
SULFATE (as SO4) 14808-79-8	MG/L							
SULFIDE (as S)	MG/L							
SULFITE (as SO3) 14265-45-3	MG/L							
SURFACTANTS	MG/L							
ALUMINUM, TOTAL 7429-90-5	MG/L							
BARIUM, TOTAL 7440-39-3	MG/L							
BORON, TOTAL 7440-42-8	MG/L							

PARAMETER AND CAS NUMBER (if available)	UNITS	MARK 'X' PRESENT	MARK 'X' ABSENT	MARK 'X' ANALYSIS KNOWN	MARK 'X' ESTIMATE	TREATED INTAKE AVERAGE VALUE (1)	EFFLUENT AVERAGE VALUE (2)	EFFLUENT MAXIMUM VALUE (3)
COBALT, TOTAL 7440-48-4	MG/L							
IRON, TOTAL 7439-89-6	MG/L							
MAGNESIUM, TOTAL 7439-95-4	MG/L							
MOLYBDENUM, TOTAL 7439-98-7	MG/L							
MANGANESE, TOTAL 7439-96-5	MG/L							
TIN, TOTAL 7440-31-5	MG/L							
TITANIUM, TOTAL 7440-32-6	MG/L							
2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (TCDD) 1746-01-6	µG/L							

OTHER POLLUTANTS (see instructions)	UNITS (specify)	MARK 'X' ANALYSIS KNOWN	MARK 'X' ESTIMATE	TREATED INTAKE AVERAGE VALUE (1)	EFFLUENT AVERAGE VALUE	EFFLUENT MAXIMUM VALUE

EPA Form 3510-1 (6-77) REVERSE

Please print or type with an ELITE typewriter in the shaded area only.

Form Approved
OMB No. 158-R00XX

FORM 3 RCRA

EPA

U S ENVIRONMENTAL PROTECTION AGENCY
HAZARDOUS WASTE INFORMATION SUMMARY
Consolidated Permits Program
(This information is required under Section 3005 of RCRA.)

I. FACILITY I.D. NUMBER

See instructions manual for guidance in completing this form.

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (month, day, & year)	DATA REQUEST DATE	INDICATOR	PERMIT NUMBER
			☐ MAJOR ☐ MINOR	

LATITUDE (deg., min., & sec.)	LONGITUDE (deg., min., & sec.)	UTM ZONE	UTM COORDINATES

COMMENTS

II. APPLICANT'FACILITY RELATIONSHIP (mark 'X')

☐ A. OWNED
☐ B. TO BE PURCHASED
☐ C. PRESENTLY RENTED OR LEASED, AGREEMENT EXPIRES- (mo., day, & yr.)
☐ D. TO BE RENTED OR LEASED FOR- (number of years)

III. FACILITY STATUS (mark 'X')

☐ A. EXISTING OPERATION
☐ B. TO BE MODIFIED
☐ C. PROPOSED OPERATION
☐ D. UNDER CONSTRUCTION

IV. TYPE OF PERMIT APPLICATION (mark 'X')

☐ A. REGULAR
☐ B. SPECIAL PERMIT - EXPERMENTAL
☐ C. SPECIAL PERMIT - HEALTH CARE FACILITY

V. ZONING

A. What is the present zoning of the site?

B. If a zoning change is needed, what should the new zoning be?

DRAFT

VI. FACILITY DRAWINGS

Provide copies of all available drawings and specifications for the hazardous wastes management facility, its processes, and equipment.

VII. IF HEALTH CARE FACILITY

Owners/operators of HEALTH CARE facilities applying for special permit under Section 3005 of RCRA must provide the following

A. A certification signed by the appropriate state licensing authority specifying that the facility has an effective license and is in compliance with such license.

B. A list of hazardous wastes covered by this license.

VIII. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (type or print)	B. SIGNATURE	C. DATE SIGNED

Print or type (with an ELITE typewriter) in the shaded area only.

Form Approved OMB NO. 158-R79XX

U S ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE INFORMATION SUMMARY (continued)

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

I. FACILITY I.D. NUMBER

IX. HAZARDOUS WASTES DESCRIPTION

INSTRUCTIONS

GENERAL: Each of the following instructions apply specifically to each part of Item IX. Before completing, photo copy as many copies as necessary of the reverse side, so that that you'll be able to list all your wastes.

A. WASTE NUMBER: Starting with '1', enter a number sequentially for each waste described.

B. HAZARDOUS WASTE NAME: Enter the common name of the waste described.

C. CONFIDENTIALITY CLAIM: If you wish to keep information about a specific waste confidential, mark 'X'.

D. WASTE DEFINITION CODE: Enter the appropriate code from Appendix C of the instructions manual.

E. HAZARD CLASS: Enter the appropriate EPA and DOT codes from the following lists.

1. DOT HAZARD CLASS CODES

EA = EXPLOSIVES A
EB = EXPLOSIVES B
EC = EXPLOSIVES C
FL = FLAMMABLE LIQUID
FS = FLAMMABLE SOLID
OX = OXIDIZER
NG = NONFLAMMABLE GAS
CL = CORROSIVE LIQUID
PA = POISON A
PB = POISON B
RM = RADIOACTIVE MATERIAL
OP = ORGANIC PEROXIDE
CH = CHLORINE
OL = OXYGEN, PRESSURIZED LIQUID
OR = OTHER REGULATED MATERIAL

2. EPA HAZARD CLASS CODES

B = BIOACCUMULATIVE
I = IGNITABLE
O = ORGANIC TOXICANT
C = CORROSIVE
R = REACTIVE
A = RADIOACTIVE
M = MUTAGENIC
N = INFECTIOUS
T = TOXIC

F. ACTION CODE: Enter the appropriate code(s) from the following list. S = STORE T = TREAT D = DISPOSE

G. AMOUNT: Enter the annual amount of waste handled to the nearest whole digit using any of units of measure described in 'H'. If the reported figure is greater than nine digits, enter '9' in every space.

H. UNITS OF MEASURE: Enter the appropriate code from the following list.

ENGLISH UNITS	METRIC UNITS
P = POUNDS	K = KILOGRAMS
T = TONS (short)	M = TONNES (metric)
G = GALLONS	L = LITERS
Y = CUBIC YARDS	C = CUBIC METERS

I. HANDLING CODE: Enter the appropriate code from the list provided in the instructions manual.

J. HANDLING TECHNIQUE: Briefly describe the technique used to handle the waste.

A. WASTE NO.	B. HAZARDOUS WASTE NAME					
C. CLAIM OF CONFIDENTIALITY	D. WASTE DEFINITION CODE	E. HAZARD CLASS 1. DOT	E. HAZARD CLASS 2. EPA	F. ACTION CODE	G. AMOUNT	H. UNITS OF MEASURE
I. HANDLING CODE	J. HANDLING TECHNIQUE					

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A. WASTE NO.	B. HAZARDOUS WASTE NAME					
C. CLAIM OF CONFIDENTIALITY	D. WASTE DEFINITION CODE	E. HAZARD CLASS 1. DOT	E. HAZARD CLASS 2. EPA	F. ACTION CODE	G. AMOUNT	H. UNITS OF MEASURE
I. HANDLING CODE	J. HANDLING TECHNIQUE					

A. WASTE NO.	B. HAZARDOUS WASTE NAME					
C. CLAIM OF CONFIDENTIALITY	D. WASTE DEFINITION CODE	E. HAZARD CLASS 1. DOT	E. HAZARD CLASS 2. EPA	F. ACTION CODE	G. AMOUNT	H. UNITS OF MEASURE
I. HANDLING CODE	J. HANDLING TECHNIQUE					

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I.D. NO. → 3 W [ ] 1 2 - 13 14 15

Form Approved OMB No. 158—R00XX

A. WASTE NO.	B. HAZARDOUS WASTE NAME					
C. CLAIM OF CONFIDENTIALITY 16	D. WASTE DEFINITION CODE 17 - 24	E. HAZARD CLASS 1. DOT 25 26	E. HAZARD CLASS 2. EPA 28	F. ACTION CODE 29 - 32	G. AMOUNT 33 - 41	H. UNIT OF MEASURE 42
I. HANDLING CODE 43 - 45	J. HANDLING TECHNIQUE					
A. WASTE NO.	B. HAZARDOUS WASTE NAME					
C. CLAIM OF CONFIDENTIALITY 16	D. WASTE DEFINITION CODE 17 - 24	E. HAZARD CLASS 1. DOT 25 26	E. HAZARD CLASS 2. EPA 28	F. ACTION CODE 29 - 32	G. AMOUNT 33 - 41	H. UNIT OF MEASURE 42
I. HANDLING CODE 43 - 45	J. HANDLING TECHNIQUE					
A. WASTE NO.	B. HAZARDOUS WASTE NAE NAME					
C. CLAIM OF CONFIDENTIALITY 16	D. WASTE DEFINITION CODE 17 - 24	E. HAZARD CLASS 1. DOT 25 26	E. HAZARD CLASS 2. EPA 28	F. ACTION CODE 29 - 32	G. AMOUNT 33 - 41	H. UNIT OF MEASURE 42
I. HANDLING CODE 43 - 45	J. HANDLING TECHNIQUE					
A. WASTE NO.	B. HAZARDOUS WASTE NAME					
C. CLAIM OF CONFIDENTIALITY 16	D. WASTE DEFINITION CODE 17 - 24	E. HAZARD CLASS 1. DOT 25 26	E. HAZARD CLASS 2. EPA 28	F. ACTION CODE 29 - 32	G. AMOUNT 33 - 41	H. UNIT OF MEASURE 42
I. HANDLING CODE 43 - 45	J. HANDLING TECHNIQUE					
A. WASTE NO.	B. HAZARDOUS WASTE NAME					
C. CLAIM OF CONFIDENTIALITY 16	D. WASTE DEFINITION CODE 17 - 24	E. HAZARD CLASS 1. DOT 25 26	E. HAZARD CLASS 2. EPA 28	F. ACTION CODE 29 - 32	G. AMOUNT 33 - 41	H. UNIT OF MEASURE 42
I. HANDLING CODE 43 - 45	J. HANDLING TECHNIQUE					

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EPA Form 2345-XA (Y-79) REVERSE

PAGE OF

BILLING CODE 6560-01-C

Consolidated Permit Application Form

Form 4—UIC: Underground Injection of Fluids [Reserved]
Form 5—PSD: Proposed Facilities (PSD New Sources, NPDES New Sources and New Dischargers, and New Injection Wells) [Reserved]

Instructions for Consolidated Permit Application

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Instructions For Consolidated Permit Application

Section A. General Instructions

Who must apply?

With the exceptions described in the next section, Federal laws require you to apply for and receive a permit as follows:

• *NPDES* (National Pollutant Discharge Elimination System under the Clean Water Act, 33 U.S.C. 1251). You may not discharge pollutants into the waters of the United States without an NPDES permit.

• *RCRA* (Resource Conservation and Recovery Act, 42 U.S.C. 6901). You must have a permit to treat, store, or dispose of hazardous wastes.

• *UIC* (Underground Injection Control under the Safe Drinking Water Act, 42 U.S.C. 300f). You may not inject fluids underground by gravity flow or pumping without a UIC permit.

• *PSD* (Prevention of Significant Deterioration under the Clean Air Act, 72 U.S.C. 7401). Most new or modified sources of air pollution which are located in or near an area which has attained the National Ambient Air Quality Standards for one or more pollutants must have a PSD permit.

The U.S. Environmental Protection Agency (EPA) is consolidating the above permits into a single permit program, although approved States operate some programs in place of EPA. You must use this application form to apply for a permit for those programs administered by the EPA. For those programs administered by approved States, contact the State environmental agency for the proper forms.

Form 1 of the EPA consolidated form collects general information applying to all programs and must be filled out by all applicants, regardless of whether your operation or activity requiring a permit is new or existing. In addition, you must fill out a supplemental form for each permit needed under each of the above programs. Item I of Form 1 provides a guide to the additional forms you need for your activities.

You should note that certain activities do not require a permit. These exclusions are summarized below, and described in greater detail in section C of these instructions. If you are not required to have a permit under any of the programs above, then you do not need to complete and return any forms.

If you have any questions about whether you need a permit under any of the above programs, contact the appropriate Regional office of the U.S. Environmental Protection Agency as indicated in Table 1.

Copies of application forms are available from all U.S. Environmental Protection Agency Regional offices.

Who Need Not Apply

The above statues and EPA's regulations exclude certain activities from requirements to apply for and obtain a permit. These exclusions are summarized below. If you think you may not need a permit, refer to section C of these instructions, where the regulatory and statutory exclusions governing the exclusions are described in greater detail.

Table 1—Addresses of EPA Regional Offices and States Within Their Jurisdiction

Region I

Regional Administrator, John F. Kennedy Federal Building, Room 2203, Boston, Mass. 02203, 617–223–7210, FTS 223–7210, Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont

Region II

Regional Administrator, 26 Federal Plaza, Room 1009, New York, New York 10007, 212–264–2525, FTS 264–2525, New Jersey, New York, Virgin Islands, Puerto Rico

Region III

Regional Administrator, Curtis Building, 6th & Walnut Streets, Philadelphia, Pennsylvania 19106, 215–597–9814, FTS 597–9814, Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia

Region IV

Regional Administrator, 345 Courtland Street, N.E., Atlanta, Georgia 30308, 404–881–4727, FTS 257–4727, Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee

Region V

Regional Administrator, 230 South Dearborn Street, Chicago, Illinois 60604, 312–353–2000, FTS 353–2000, Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin

Region VI

Regional Administrator, First International Building, 1201 Elm Street, Dallas, Texas 75270, 214–767–2600, FTS 767–2600, Arkansas, Louisiana, New Mexico, Oklahoma, Texas

Region VII

Regional Administrator, 324 East 11th Street, Kansas City, Missouri 64106, 816–374–5493, FTS 374–5493, Iowa, Kansas, Missouri, Nebraska

Region VIII

Regional Administrator, 1860 Lincoln Street, Denver, Colorado 80203, 303–837–3895, FTS 327–3895, Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming

Region IX

Regional Administrator, 215 Fremont Street, San Francisco, California 94105, 415–556–2320, FTS 556–2320, Arizona, California, Hawaii, Nevada, Guam, American Samoa, Trust Territories

Region X

Regional Administrator, 1200 6th Avenue, Seattle, Washington 98101, 206–442–1220, FTS 399–1220, Alaska, Idaho, Oregon, Washington

a. *Discharges to water.* You are not required to obtain an NPDES permit for the following types of discharges:

• Sewage discharged from vessels (e.g., ships);

• Water, gas and other materials injected into a well to facilitate production of oil or gas production and disposed of in a well, where authorized by the State in which the well is located;

• Dredged or fill material subject to a permit under section 404 of the Clean Water Act;

• Discharges from properly functioning marine engines;

• Discharges conveyed directly to a publicly or privately owned waste treatment facility (however, discharges originating from publicly or privately owned waste treatment facilities are not excluded);

• Some discharges from separate storm sewers (discharges from storm sewers which receive industrial, municipal, and/or agricultural wastes which are considered by the permitting authority to be significant contributors to pollution are not excluded); or

• Animal feeding operations and aquatic animal production facilities below certain sizes.

b. *Hazardous wastes.* With certain exceptions, you are not required to obtain a RCRA Subtitle C permit if you:

• Are a generator or transporter storing hazardous wastes for less than 90 days;

• Are disposing of less than 100 kg of hazardous wastes per month;

• Are a farmer or retailer; or

• Operate publicly owned treatment works (POTW) and ocean disposal barges or vessels that accept hazardous waste designated as special waste. You will be subject to a *permit by rule* and are *not* required to submit an RCRA permit application.

c. *Underground injection of fluids.* You are not required to obtain a permit under this program if you:

• Inject into existing wells used to enhance recovery of oil and gas or to store hydrocarbons (note, however, that these underground injections are regulated by Federal rules); or

• Inject into or above an underground source of drinking water. However, you must notify EPA of your injection and submit certain required information on forms supplied by the Agency, and your operation will be phased out (see regulations proposed on April 20, 1979, 44 FR 23738.)

d. *Air emissions.* The following types of activities do not require a PSD (Prevention of Significant Deterioration) permit under the Clean Air Act:

• All existing sources;

• Members of the 28 industries listed in Table 2 of the instructions to item I of Form 1 which do not emit or have the potential (prior to control) to emit more than 100 tons per years of any air pollutant;

• Any other sources which do not emit or have the potential (prior to controls) to emit more than 250 tons per year of any air pollutant;

• Any other sources which do not emit or have the potential (prior to controls) to emit more than 250 tons per year of any air pollutant; or

• Proposed nonprofit health or education institutions exempted by a State.

Again, please note that these exclusions are more carefully defined in section C of these instructions. Before determining that you do not need any permits, refer to section C of these instructions because the statute for each of the programs above provides that *you may be heavily penalized if you do not apply for a permit where a permit is required.*

Upon your request, and based upon information supplied by you, EPA will determine whether you are required to obtain a permit for a particular activity. Contact the appropriate EPA Regional office listed in Table 1.

Where to File

The original of the application form should be mailed to the EPA Regional office having jurisdication over the State in which the discharge is located (see Table 1).

If the State in which the facility is located has one or more Federally approved permit programs, you should contact the appropriate State agencies for the correct forms. You may obtain the addresses of the appropriate State agencies from your EPA Regional office (Table 1).

When to File

Because of statutory requirements, the deadlines for filing applications vary according to the type of facility you operate and the type of permit you need. In addition, if you need two or more permits, Federal regulations have been proposed which, if promulgated, may allow you to postpone filing one of them in order to consolidate your applications. [See 44 FR. (. 1979).]

A detailed guide to when you must file and whether you can postpone filing to consolidate applications appears in the instructions to item I of Form 1.

Fees

The U.S. EPA does not require a fee for applying for any permit under the consolidated permit program. However, some States are primarily responsible for administering certain permit programs, and these States may require a fee. You should check with the State administering the program to determine whether any fees are required.

Use of Information.

All information contained in this application will, upon request, be made available to the public for inspection and copying. A separate sheet entitled "Confidential Answers" must be used to set out information which is considered by the applicant to be methods and processes entitled to protection as trade secrets. The information must clearly indicate the item number to which it applies. Confidential treatment can be considered only for the information for which a specific written request of confidentiality has been made on the attached sheet.

However, the Clean Water Act requires that *all* information contained by the NPDES part of the application must be public information, and may not protected as confidential or privileged information, except in certain cases involving national security.

Completion of Forms

Unless otherwise specified in the following instructions, each item in each form submitted must be answered. To indicate that each item has been considered, enter "NA", for not applicable, where a particular item does not fit the circumstances or characteristics of your facility or activity.

If you have previously submitted information to the U.S. EPA or to an approved State agency which answers a question, either repeat the information in the space provided, or attach a copy of the previous submission. If you attach a copy of the previous submission, state that you are doing so in your answer to the question, and identify the attached information by the name of the facility, and the form and item number to which the submission refers.

If you have any questions on any item, contact your EPA Regional office.

Attachments and Supplemental Information

Some items in the form require narrative explanation. If more space is necessary to answer a question, attach a separate sheet entitled "Additional Information". Where a separate sheet is used or when other information is attached, identify it by the name of the facility, and the form and item number to which the explanation refers.

Financial Assistance for Pollution Control

There are a number of direct loans, loan guarantees, and grants available to eligible facilities for pollution control expenditures. These are provided by the Small Business Administration, the Economic Development Administration, and the Farmers Home Administration. Each U.S. EPA Regional office (Table 1) has a financial assistance coordinator who can provide you with additional information.

In addition, EPA's construction grants program under Title II of the Clean Water Act may be an additional source of assistance to publicly owned treatment works. Contact the

appropriate EPA Regional office for details.

Section B. Detailed Instructions

Form 1—General Information

This form must be completed by all applicants.

Item I. Answer each question to determine whether you need to fill out additional special forms for each permit program. Be sure to check the glossary in section D of these instructions for the legal definitions of the bold faced words.

Questions (I) and (J) refer to 28 industries which may be subject to prevention of significant deterioration (PSD) requirements under the Clean Air Act of 1977. These industries are listed in Table 2.

Table 2—The 28 Industrial Categories Subject to PSD Requirements under the Clean Air Act of 1977

Fossil fuel-fired steam generators of more than 250 million BTU per hour heat input
Coal cleaning plants (with thermal dryers)
Kraft pulp mills
Portland cement plants
Primary zinc smelters
Iron and steel mills plants
Primary aluminum ore reduction plants
Primary copper smelters
Municipal incinerators capable of charging more than 250 tons of refuse per day
Hydrofluoric acid plants
Nitric acid plants
Sulfuric acid plants
Petroleum refineries
Lime plants
Phosphate rock processing plants
Coke oven batteries
Sulfur recovery plants
Carbon black plants (furnace process)
Primary lead smelters
Fuel conversion plants
Sintering plants
Secondary metal production plants
Chemical process plants
Fossil fuel boilers (or combination thereof) totaling more than 250 million BTU per hour heat input
Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels
Taconite ore processing plants
Glass fiber processing plants
Charcoal production plants.

If you checked "no" to every question, then you do not need a permit, and you do not need to complete and return any of these forms.

If you checked "yes" to a question, you should note that federal regulations may exclude your activity from requirements to apply for and obtain a permit. Those exclusions are summarized in the General Instructions, and the regulations governing the exclusions are described in detail in section C of the instructions.

Note that the Federal statute for each program provides for serious penalties if you do not apply for a permit where a permit is required. If you have any doubt about whether you need to apply for a permit under any program, contact the appropriate EPA Regional office listed in Table 1.

If you checked "yes" to any box, and you determined that you are required to have a permit, then complete and file additional forms in accordance with Table 3.

Table 3.—*Forms and Filing Dates for Permits*

If you checked yes in item:	Then you must file:	By this deadline:
A	EPA Standard Form A, OMB No. 158-120100.	180 days before your present permit expires.
B	Forms 1 and 2b	180 days before your present permit expires, or 180 days prior to startup.
C	Forms 1 and 2c	180 days before your present permit expires.
D	[Reserved. Check with EPA Regional office for forms].	180 days prior to startup.
E	Forms 1 and 3	Existing facility: 180 days following publication of final regulations. New facility: 180 days before commencing physical construction. (See Glossary for definition of terms.)
F, G, or H	[Reserved]	You are not now required to apply for a permit. Future regulations will set requirements.
I or J	[Reserved. Check with EPA Regional office for forms].	You must obtain a Prevention of Significant Deterioration (PSD) permit before you commence construction. See 43 FR 26380 (June 19, 1978).

Federal regulations require you to file in accordance with the above deadlines. Regulations have recently been proposed, however, which when promulgated may allow postponement of certain filing requirements in order to consolidate applications [see 44 FR [, 1979)]. Until these regulations are promulgated, however, the above deadlines apply and may not be postponed.

See the General Instructions to determine where to file your completed application.

If you don't have all the permit forms you need, you can obtain them by writing or phoning your nearest EPA Regional office.

Item II. Facility Identification Number. A common number for each business establishment will help the U.S. EPA and State environmental agencies to consolidate all environmental activities and requirements affecting the business establishment. In addition, common identification numbers will help EPA and State environmental agencies speed up the processing of all information submitted under Federal and State environmental regulations.

The facility identification number requested here for private, municipal, and State-owned facilities is the Data Universal Numbering System, or otherwise called the DUNS Number, developed by Dunn and Bradstreet, Inc. Most business establishments in the United States have already been assigned DUNS numbers, including all types and sizes of business establishments, branches, factories, distribution centers and purchasing units. State and municipal facilities, including publicly owned treatment works, have also been assigned DUNS numbers.

In some cases, EPA can provide you with your DUNS number. If so, you can find your DUNS number preprinted on the upper left hand corner of the label used to mail these forms to you. If EPA did not provide you with your number on your mailing label and you need to find out the DUNS number for your business, you can obtain this information free of charge by calling the nearest office of Dunn and Bradstreet, Inc.

For Federal facilities, the General Services Administration (GSA) real property number should be used. All Federal facilities have already been assigned a real property number by GSA. If you don't know your number, call the nearest local office of GSA.

Fill in the number as follows:

- *State code*—In the first two positions of the number insert the U.S. Postal Service State Code for the appropriate State or territory in which the facility is located, such as PA, MD, NJ, NY, or MA;
- *DUNS or GSA Identifier and Number*—In the remaining positions after the State code insert a "D" for a private, municipal, or State-owned facility followed by the 9 digit DUNS number; *OR* insert a "G" for a Federally

owned facility followed by the GSA number.

Examples

1. Private facility ——— PAD784621382 in Pennsylvania
2. Federal facility ——— NYG284370155 in New York
3. State facility ——— CAD 362429824 in California

Item III. The facility is the distinct activity or installation, under the responsibility of the applicant, which is subject to one or more of the permit programs detailed in item I of this form. Name the facility as it is officially or legally referred to in order to distinguish it from similar entities in the same geographical area. Do not use colloquial names as a substitute for the official name.

Item IV. Give the name, title, and work telephone number of a person who is thoroughly familiar with the operation of the facility and with the facts reported in this application and can be contacted by reviewing offices if necessary.

Item V. Give the complete mailing address of the facility's main office, where correspondence should be sent. This often will not be the same address used to designate the location of the facility or activity.

Item VI. Give the address or location of the facility identified in Item III of this form.

Item VII. List the four most significant 4-digit standard industrial classification (SIC) codes describing the nature of your facility, in descending order of importance in terms of the principal products you produce. Also, specify each classification in words. These classifications may differ from the SIC codes describing the operation generating the discharge, air emissions, or hazardous wastes.

Standard industrial classification (SIC) code numbers are descriptions which may be found in the 1972 edition of the "Standard Industrial Classification Manual" prepared by the Executive Office of the President, Office of Management and Budget, which is available from the Government Printing Office, Washington, D.C. Do not use previous editions of the manual.

Item VIII–A. Give the name, as it is legally referred to, of the person, firm, public organization, or any other entity which owns or is directly responsible for the facility or activity described in this application. This may or may not be the same name as the facility or activity producing the discharge. Do not use colloquial names as a substitute for the official name.

Item VIII–B. Enter the appropriate letter to indicate the type of ownership. Indicate "public" for a facility solely owned by local government(s) such as a city, town, county, parish, etc.

Items VIII–C, D, E, F, and G. Enter the telephone number and address of the owner identified in item VIII–A.

Item IX. Give the number of each presently effective permit issued to the facility for each program, or if you have previously filed an application but have not yet received a permit, give the number of the application, if any. List any relevant environmental State or local permits or applications under "other".

Item X. Provide a topographic map or maps of the area extending at least to one mile beyond the property boundaries of the source which clearly show the following:

- The outline of the facility;
- The locaton and serial number of each of your existing and proposed intake and discharge structures;
- Each of the hazardous waste treatment, storage, or disposal facilities which you own or operate;
- Each well where you inject fluids underground; and
- All known wells, springs and surface water bodies in the area.

Where an intake or discharge structure, hazardous waste disposal site, or injection well associated with the facility is located more than one mile from the plant, include it on the map, if possible. If not, attach additional sheets describing the location of the structure, disposal site or well, and identify the U.S. Geological Survey map corresponding to your description.

On each map, include the map scale, a meridian arrow showing north, and latitude and longitude at the nearest whole second. On all maps of rivers, show the direction of the current, and in tidal waters, show the directions of the ebb and flow tides. The scale of the map shall have one inch equal to no more than 2000 feet. This corresponds to a 7½ minute series map published by the U.S. Geological Survey, which may be obtained through the U.S. Geological Survey Offices in Washington, D.C., Denver, Colorado, or Anchorage, Alaska. If a 7½ minute series map has not been published for your facility site, then you may use a 15 minute series map from the U.S. Geological Survey.

You may trace your map from a geological survey chart, or other map meeting the above specifications. If you do, your map should bear a note showing the number or title of the map or chart it was traced from. Include the names of nearby towns, water bodies, and other prominent points. An example of an acceptable location map is shown in Figure A of these instructions.

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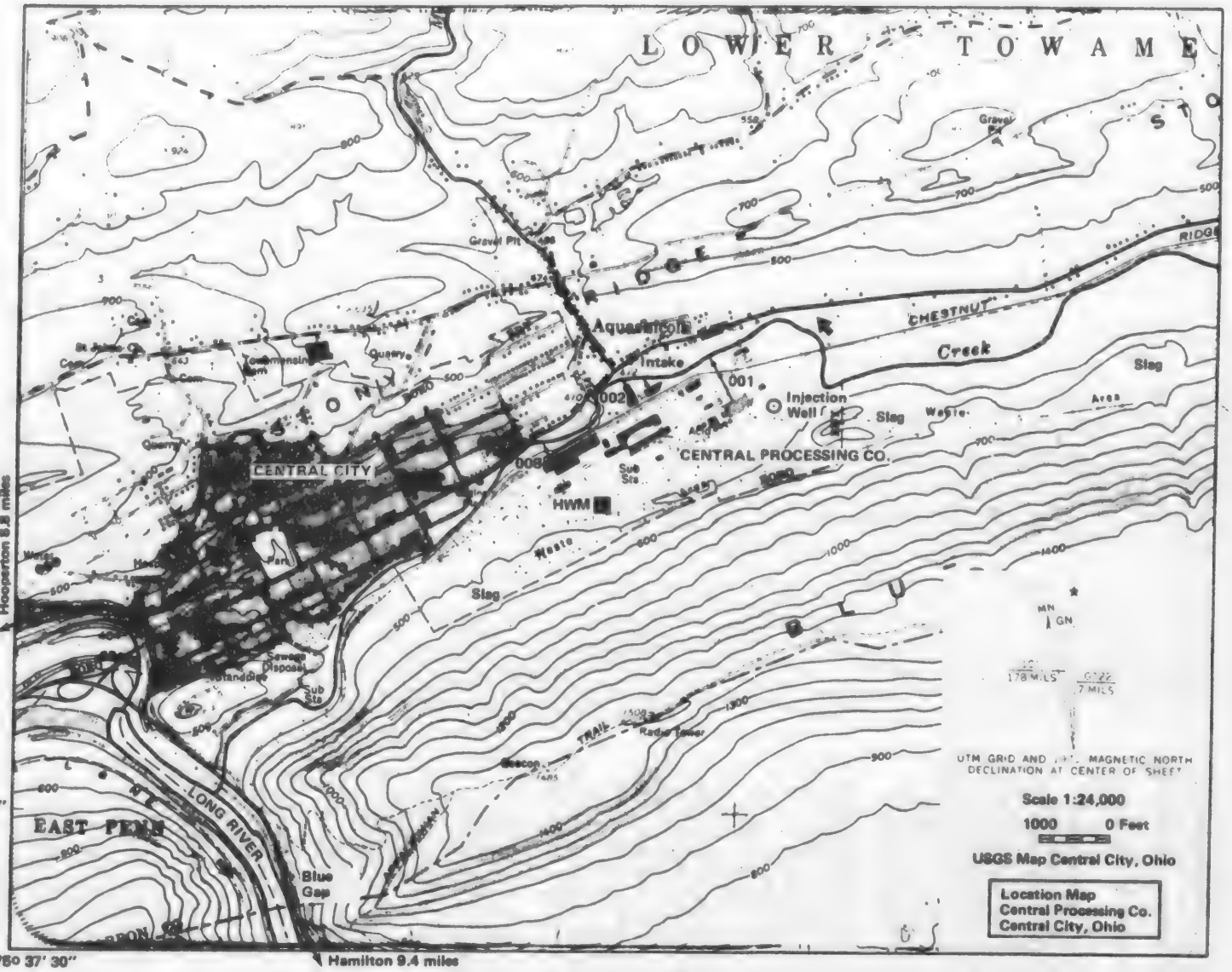

FIGURE A

BILLING CODE 6560-01-C

Note.—This map is provided for purposes of illustration only, and does not represent any actual facility.

Item XI. Self explanatory.

Item XII. Federal statutes provide for severe penalties for submitting false information on this application form.

18 U.S.C. section 1001 provides that "Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than $10,000 or imprisonment not more than five years, or both."

Section 309(c)(2) of the Clean Water Act and section 113(c)(2) of the Clean Air Act each provide that "Any person who knowingly makes any false statement, representation, or certification in any application, * * * shall upon conviction, be punished by a fine or no more than $10,000 or by imprisonment for not more than six months, or both."

In addition, section 3008(d)(3) of the Resource Conservation and Recovery Act provides for a fine up to $25,000 or imprisonment up to one year for a first conviction for making a false statement in any application under the Act, and for double these penalties upon subsequent convictions.

Federal Regulations Require This Application to be Signed as Follows:

(1) For a corporation, by a principal executive officer of at least the level of vice president;

(2) For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

This application is not considered to be complete until it is signed by the appropriate official.

Form 2a—NPDES: Publicly Owned Treatment Works [Reserved. Until a new form and accompanying instructions are developed all applicants should continue to use the existing form, OMB No. 158–R0100, Standard Form A]

Form 2b—NPDES: Concentrated Animal Feeding Operations and Aquatic Animal Production Facilities

This form must be completed by all persons who checked "yes" to item I–B in Form 1.

Note that not all animal feeding operations or fish farms are required to obtain NPDES permits. Exclusions are based on size and occurrence of discharge. See the description of these statutory and regulatory exclusions in section C of the instructions. In particular, for animal feeding operations, the size cutoffs are smaller for facilities where pollutants are discharged into water of the United States by a man-made device, or are discharged because waters of the United States make direct contact with the facility. Also, a facility for laying hens or boilers is not "concentrated" unless it has a liquid manure handling system or continuous overflow watering.

For aquatic animal production facilities, the size cutoffs are based on whether the species are warm water or cold water, on the production weight per year in harvestable pounds, and on the amount of feeding in pounds of food (for cold water species). Also, only facilities which discharge at least 30 days per year, or only during periods of excess runoff (for warm water fish) are "concentrated" and required to apply for an NPDES permit.

Item I–A. See note above and sections C and D to the instructions to be sure that your facility is "concentrated".

Item I–B. Supply the quarter, section, township and range of your facility location.

Item I–C. Check "proposed" if your facility is not now in operation, or not now "concentrated" under the statutory definition.

Item II. Supply all information in item II if you checked (1) in item I–A.

Item II–A. Give the maximum number of each type of animal in open confinement or housed under roof held at your facility for a total of 45 days or more in any 12 month period.

Use the following categories for type of animals:

Slaughter Cattle
Feeder Cattle
Mature Dairy Cattle (milked or dry)
Swine (each weighing over 55 pounds)
Horses
Sheep
Lambs
Turkeys
Laying Hens*
Broilers*
Ducks

*Application for permit is not required unless facility has a liquid manure handling system or continuous overflow watering.

Item II–B. (1) Give only the area used for the animal confinement or feeding facility. Do not include area used for growing or operating feed.

(2) Provide the number of acres of land that are owned or leased by the facility for manure disposal.

Item II–C. Check "yes" if any system for collection of runoff has been constructed. Supply the information under (1), (2), and (3) to the best of your knowledge.

Item III. Supply all information in item III if you checked (2) in item I–A.

Item III–A. Outfalls should be numbered to correspond with the map submitted as required by Form 1. Values given for flow should be representative of your normal operation. The maximum daily flow is the maximum flow occurring over a 24-hour period. The maximum monthly flow is the average daily flow in the consecutive 30-day period of highest flow. The average yearly flow is the average flow over a calendar year.

Item III–B. Give the total number of discrete ponds or raceways in your facility. Under "other", give a descriptive name of any structure which is not a pond or a raceway but which results in discharge to waters of the United States.

Item III–C. Use names corresponding to the map attached with Form 1.

Item III–D. The names for fish species should be proper, common, or scientific names as given in special Publication No. 6 of the American Fisheries Society, "A List of Common and Scientific Names of Fishes from the United States and Canada". The values given for total weight produced by your facility per year and the maximum weight present at any one time should be representative of your normal operation.

Item III–E. The value given for maximum monthly pounds of food should be representative of your normal operation.

Item IV. The Clean Water Act provides for severe penalties for submitting false information on this application form.

Section 309(c)(2) of the Clean Water Act provides that "Any person who knowingly makes any false statement, representation, or certification in any application, * * * shall upon conviction, be punished by a fine or no more than $10,000 or by imprisonment for not more than six months, or both."

Federal Regulations Require This Application To Be Signed as Follows:

(1) For cooperation, by a principal executive officer of at least the level of vice president;

(2) For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

This application is not considered to be complete until it is signed by the appropriate official.

Form 2c—NPDES: Existing Manufacturing, Commercial, Mining and Silvicultural Operations

Public Availability of Submitted Information. Your application will not be considered complete unless you answer every question on this form. Where an item does not apply to you, enter "NA" (for not applicable) to show that you considered the question.

Under Federal statutes and regulations, you may not withstand any information requested in this form as confidential (except in certain cases involving national security). Federal statutes also require that all information submitted on this form must be made available to the public.

Definitions. All significant terms used in these instructions and in the form are defined in the glossary found in section D of the instructions.

Item I–A. All effluent guidelines promulgated by EPA appear in the **Federal Register** and are codified yearly in 40 CFR Subchapter N. If you are unsure whether you are affected by a promulgated effluent guideline, check with your EPA Regional office (Table 1). You must check "yes" if an effluent guideline affecting you has been promulgated, even if the guideline limitations are being contested in court. If you believe that a promulgated effluent guideline has remanded for reconsideration by a court and does not apply to your operations, you may check "no", but you must identify the guideline in question in item I–B. In addition, you may check "no" here if an effluent guideline has been promulgated but the limits are not expressed in terms of production.

If you improperly check "no", and do not provide the production information required in item I–B, then this application will not be considered to be complete.

Item I–B. This item must be completed only if you checked "yes" to item I–A. The production information requested here is necessary to apply effluent guidelines promulgated by EPA under section 304 of the Clean Water Act, and *you may not withhold it as confidential.*

List the principal products produced (or if the effluent guideline is expressed in terms such as raw materials consumed or services provided, list the appropriate materials or services) and the average and maximum quantities produced or consumed per operating day at the facility. The production figures provided must reflect a reasonable measure of actual operation (such as the high month during the last twelve months, or the highest year of the last five years), which represents the level of activity expected over the next five years. Report quantities in the units of measurement normally used by your industry.

Where several similar articles are produced, use a broader term which will include all or most of the specific ones, e.g., use "costume jewelry" to designate the production of bracelets, earrings, and pins.

All terms used to describe production, etc, must correspond to the terms used in the applicable effluent guideline.

Item II. Self explanatory. An example of an acceptable line drawing appears in Figure B to these instructions.

Item III–A. Complete to the best of your ability, and base your answers on actual flow measurements whenever available. Where unavailable, you may use your best estimates. Each term is defined in the Glossary.

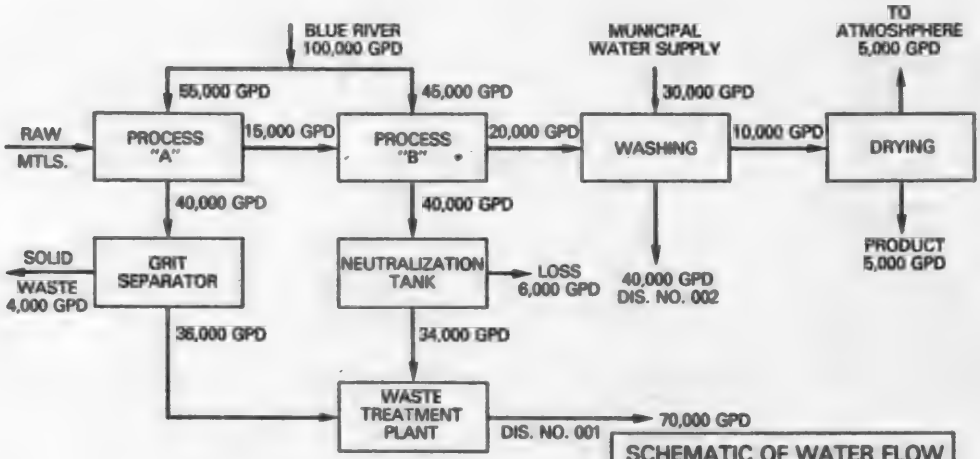

FIGURE B

For storm runoff, base your entry under "maximum flow" upon the 10-year 24-hour rainfall event. You may enter UNK (for unknown) for the average flow under this heading if no data on the average flow is available and you are unable to make an estimate.

In addition, specify any other source of wastewater discharged from any outfall.

Item III–B. You must complete this item to the best of your ability for discharges of toxic or hazardous pollutants to waters of the United States from ancillary industrial activities. Ancillary activities include:

(1) Plant site runoff.
(2) Spillage or leaks.
(3) Sludge or waste disposal.
(4) Materials storage and handling.
(5) Loading and unloading areas.

Describe the source of the discharge (e.g., drainage from truck loading stations, or runoff from Slag Dump #4), your estimate of the average and maximum total flow of the discharge, the frequency of the discharge (e.g. once per week or twice per month), the average and maximum concentration of the pollutant in the discharge (to the best of your knowledge), and the receiving water affected.

Where no measurements or historical data are available, use estimates.

As used in this question, toxic and hazardous pollutants are those pollutants listed under sections 307(a) and 311 of the Clean Water Act. The section 307(a) toxic pollutants include all pollutants listed in item V–B of this Form, plus cyanide, asbestos and 2,3,7,8 Tetrachlorodibenzo-p-dioxin (TCDD). The section 311 hazardous substances, which include many of the toxic pollutants, are listed at 43 FR 10474 (March 13, 1978) and 44 FR 10288 (February 16, 1979).

Under recent amendments to section 311 of the Clean Water Act, you may be eligible to be exempted from the requirements and liabilities of section 311 for the discharges of hazardous substances which you list here. If you desire such exemption, you must also complete item VIII of this Form.

Item III–C. 40 CFR 125.104 requires each person discharging toxic or hazardous pollutants to waters of the United States from ancillary industrial activities to prepare a Best Management Practices program. As required by the regulation, attach a copy of your BMP program to the application. The BMP program must address the discharges you described in item III–B, and meet the specifications below. A BMP program must include the following:

- Statement of Policy
- Spill (Incident) Control Committee
- Spill Reporting and Notification
- Materials Inventory
- Employee Training
- Visual Inspections
- Preventive Maintenance
- Housekeeping
- Materials Compatability
- Security.

In addition, at your option, the BMP program may include the following:

- Monitoring
- Non-destructive Testing
- Labeling
- Covering
- Vehicle Positioning
- Pneumatic and Vacuum Conveying
- Secondary Containment
- Flow Diversion Systems Vapor/Dust Control
- Sealing
- Mitigation/Cleanup Procedures
- Treatment of Spilled Material
- Ultimate Disposal Techniques.

Additional technical guidance on BMP programs is contained in the publication "NPDES Best Management Practices Guidance Document" available for review and copying at EPA Regional offices.

Item III–D. Federal regulations define a "continuance discharge" as a discharge which occurs without interruption, except for infrequent shutdowns for maintenance, process changes, or other similar activities throughout the operating hours of the facility. As used in this question, a "noncontinuous discharge" is any discharge which is not a continuous discharge.

Exclude discharges resulting from storm runoff in your answer to this question.

Item III–E. Provide for each outfall a brief description of the processes contributing to the effluent and the pollution control technologies and practices currently in use, including in-plant recycle and reuse of wastewater streams. Indicate sizes, flow rates, and retention times for each treatment unit. If no treatment is provided, enter "none."

Example: Outfall 001. 1.5 mgd wastestream generated from blast furnace operations, furnaces #6 and #7. Treatment consists of primary sedimentation using one 24-foot clarifier (8-hour retention) followed by recycle over evaporative cooling tower. 0.1 mgd blowdown treated with high pressure filters. Clarifier underflow is treated by digestion and vacuum filtration. Final sludge disposal is by incineration.

Item IV–A. If you check "yes" to this question, complete all parts of the chart.

- Clearly identify the permit condition, administrative or enforcement order, enforcement compliance schedule letter, stipulation, court order, or grant or loan condition that requires you to meet an implementation schedule for installing, upgrading, or operating wastewater treatment equipment or practices or any other environmental programs which may affect your discharges.
- Identify each discharge within the scope of each condition, order, stipulation, or letter identified in the first column where you are now or will be required to complete a control program.
- For each discharge identified, describe the project required. Attach additional sheets if necessary.
- For each project described, list the date for final compliance as required by the condition, order, stipulation, or letter, and the date by which you now project that compliance will be achieved.

Item IV–B. Self explanatory. You are not required to submit a description of future water pollution control projects if none are planned.

Items V–A, B, and C. These items require you to submit information on the pollutant characteristics of wastewater discharged from each outfall. All parts of this question must be answered once for each outfall. You are not required to complete these items for discharges you identified in item III–B.

Your answers to parts (A) and (B) of this question must report the actual results from samples collected and analyzed in accordance with the methods specified in 40 CFR Part 136 (these methods are summarized in section E of these instructions). No estimates are acceptable for these two parts. While you may make estimates in your response to part (C) of this item, actual analyses are preferred. If you have analytical data on the levels of pollutants required by part (c), you must report it.

You Must Make an Entry Next to Each Pollutant to Show You Considered it. Where You do not Find a Pollutant to be Present, Insert in Column 3 "L.T." or "<" (Less Than) The Detection Limit of the Analytical Method. (An appropriate entry would be "L.T. 10 μg/1.")

As established by 40 CFR § 122.68(a)(2), the detection limit of the

analytical method is the least stringent of the following:

- Ten micrograms per liter;
- The detection limit (or lowest appropriate concentration) specified in the applicable analytical method promulgated under section 304(h) of the Clean Water Act (these detection limits are included in section E of these instructions); or
- The detection limit as determined by the permittee for the applicable analytical method. For this purpose, the detection limit is the lowest concentration giving a signal-to-noise ratio of five to one or less, in accordance with any generally accepted procedure for determining the level of background noise. This detection limit may be based on either a laboratory standard or an individual sample.

All values you report must be representative of your discharge during the twelve months of operation preceding the date you submit this form. Where actual analyses are required, choose a time for sampling that is representative of your normal operation. All operations and processes which contribute waste water should be operating normally, to the extent feasible. Also, your treatment system should be operating properly with no system upsets. Where you make estimates, estimate pollutant levels which reflect your normal operation, without upsets. The permitting authority, at its discretion, may require you to conduct additional sampling and analysis to further characterize your waste streams.

The three parts of this question must be completed as follows:

a. Part V–A must be completed by all applicants for all outfalls, including outfalls containing only noncontact cooling water or storm runoff. All values reported must be based on actual analyses conducted in accordance with section E of the instructions.

b. Part V–B must be completed only by all applicants in Group I industries (see Table 4), and only for those outfalls containing process wastewater (defined in the Glossary). If the information requested in this chart is available for other outfalls as well, you may use this part in lieu of "other" under Part V–C. All values reported must be based on actual analyses conducted in accordance with 40 CFR Part 136 (see section E of the instructions).

The Effluent Guidelines Division of EPA has collected and analyzed samples from some plants for the pollutants listed in Part V–B of this question in the course of its BAT development program. If your effluents were sampled and analyzed as part of this BAT development project in the last two years you may use this data to answer Part V–B of this Form: *Provided,* That the permitting authority approves, *And provided,* That no process change or change in raw materials or operating practices has occurred since the samples were taken that would make the analyses unrepresentative of your current discharge.

Table 4—The 36 Industrial Categories Classified as Group I for NPDES Application Form Requirements

1. Adhesives and Sealants
2. Aluminum Forming
3. Auto and Other Laundries
4. Battery Manufacturing
5. Coal Mining
6. Coil Coating
7. Copper Forming
8. Electric and Electronic Compounds
9. Electroplating
10. Explosives Manufacturing
11. Foundries
12. Gum and Wood Chemicals
13. Inorganic Chemicals Manufacturing
14. Iron and Steel Manufacturing
15. Leather Tanning and Finishing
16. Mechanical Products Manufacturing
17. Nonferrous Metals Manufacturing
18. Ore Mining
19. Organic Chemicals Manufacturing
20. Paint and Ink Formulation
21. Pesticides
22. Petroleum Refining
23. Pharmaceutical Preparations
24. Photographic Equipment and Supplies
25. Plastic and Synthetic Materials Manufacturing
26. Plastic Processing
27. Porcelain Enameling
28. Printing and Publishing
29. Pulp and Paperboard Mills
30. Rubber Processing
31. Soap and Detergent Manufacturing
32. Steam Electric Power Plants
33. Textile Mills
34. Timber Products Processing
35. Asbestos Manufacturing
36. Ferroalloys

c. Part V–C must be completed by all applicants for all outfalls, including outfalls containing only noncontact cooling water or storm runoff. Your answers should be based on actual analyses conducted in accordance with 40 CFR Part 136 (section E of the instructions), but your best estimate will be acceptable in the absence of analyses.

For each pollutant in this part, check "present" or "absent" and indicate whether you base this assertion on actual analyses or upon your own best judgment. If you check "present", complete columns (1) through (3) in the manner described below.

In the space marked "other" at the end of this part, identify the following pollutants if present:

- Pollutants listed in Part V–B if you are in a Group I industry (see Table 4) and if the outfall does not contain any process waste water;
- Pollutants listed in Part V–B discharged from the outfall if you are not in a Group I industry (see Table 4);
- Any pesticide not listed elsewhere in item V for which an analytical method has been promulgated in 40 CFR Part 136.

The meaning of each column heading in each of the three parts to this question is as follows:

Column 1. *This column is optional.* It must be completed only if you desire credit for pollutants present in your intake water when permit limitations are calculated. Under 40 CFR 122.70(f), you are not eligible to receive credit unless you meet the following conditions:

- The intake water is drawn from the same body of water to which it is discharged;
- A promulgated effluent guideline affecting your facility provides that limitations shall be applied on a net basis, or the pollutants present in your intake water will not be entirely removed by your treatment systems;
- Each pollutant in your intake water for which you desire credit does not vary physically, chemically, or biologically from the pollutant as it appears in your outfall; and
- The concentrations of pollutants in the intake water does not increase significantly in the discharge even if the total amount of pollutants remains the same.

Under Federal regulations, credit for pollutants present in intake waters must be calculated on the basis of the amount of pollutants present after any treatment steps have been performed on the intake water.

Complete this column in the same manner described for column (2) below.

Column 2. Specify the arithmetic average of the results of all analyses that you are reporting. These must be analyses performed during the twelve months preceding the date that this application is submitted.

If you are completing Part V–C of this item and are not basing your answers to that part on actual analyses, estimate the average value for the pollutant over a 24-hour period.

Column 3. Specify the highest of all the analyses you are reporting. If you are reporting only one analysis, enter N.A. for not applicable. If you are completing Part V–C of this item and are

not basing your answers to that part on actual analyses, estimate the maximum value expected for the pollutant over a 24-hour period.

Column 4 (Parts A and B only). Specify the number of analyses performed on your effluent during the last twelve months that form the basis of the values you reported in columns (2) and (3).

Column 5 (Parts A and B only). Specify the type of samples that were analyzed to form the basis of the values you reported in columns (1)–(3). Your entry must conform to the sample type specified in section E of the instructions, although where a choice is given, select the method that will most appropriately describe your waste stream.

Note that 40 CFR 122.68(a) establishes a limitation for each pollutant in your discharge based upon the average concentration value or detection limit you report in column (2) of this item, unless the pollutant is othewise limited in an NPDES permit. Where you do not identify a pollutant as being present, this limitation is based on the detection limit of the method (as specified in section E of the instructions or as described earlier in the instructions to this item).

Item VI–A. For this item, consider only those variations which may result in concentrations of pollutants in effluents which may exceed five times the values you reported in item V. These variations may be part of your routine operations, or part of your regular cleaning cycles.

Do Not Consider Variations Which Are the Result of Upsets or Bypasses.

Increased levels of pollutants which are discharged as a result of upsets or bypasses are regulated separately under 40 CFR 122.68(k), (l), and (m), and will not be considered here.

Item VI–B. Examples of the types of variations to be described here include:

- Changes in raw or intermediate materials;
- Changes in process equipment or materials;
- Changes in product lines;
- Chemical reactions between pollutants in waste streams, if significant;
- Variation in removal efficiencies of pollution control equipment, if significant; and
- Variation of concentrations of pollutants in intake water.

You may indicate other types of variations was well, except those which are the result of upsets or bypasses. After receipt of your application, the permitting authority may require you to further investigate or document variations you report here.

Item VI–C. Base your answer upon your knowledge of your processes, raw materials, past and projected product ranges, etc., or upon any testing conducted upon your effluents which indicates the range of variability that can be expected in your effluent over the next five years.

Example: Outfall 001 discharges water used to clean six 500-gallon tanks. These tanks are used for formulation of dispersions of synthetic resins in water (adhesives). Usage of toxic pollutants which can be expected in the next 5 years are:

1. Copper acetate inhibitor, ½ lb. per tank
2. Dibutyl phthalate, 50 lbs. per tank
3. Toluene, 5 lbs. per tank
4. Antimony oxide, 1 lb. per tank.

Based on normal cleaning, an average of 1% and a maximum of 3% of the contents of each tank is collected and discharged once every two weeks in the 150 gallons of water used for cleaning. Treatment (pH adjustment, flocculation, filtration) removes 85% of metals and 50% of organic compounds.

Items VII–A and B. Self explanatory.

Item VIII. This item asks for information concerning pollutants which are not specifically asked about elsewhere in this Form. If you or any other person has conducted examinations (including analyses) of your effluents within the last five years which resulted in data on the presence or levels of such pollutants in your waste stream, briefly describe those programs here. Use additional sheets of necessary.

Include the approximate dates the investigations were conducted, and estimate the volume of your material concerning pollutants not reported elsewhere in this application. Include brief descriptions of the following types of investigations:

- Identification or quantification of GC/MS or GC peaks not reported elsewhere in this application;
- Identification or quantification of other pollutants by other analytical methods; and
- Identification or quantification of other pollutants through formulation or by mass balances of raw or intermediate materials.

Item IX. This item is optional. You must, however, complete it if you wish to exclude certain discharges of hazardous substances from the liabilities and requirements of section 311 of the Clean Water Act (CWA). Section 311 of the CWA establishes reporting requirements, civil penalties and clean-up cost liabilities for spills of oil and hazardous substances.

The list of hazardous substances, which overlaps with the section 307(a) toxics list to some extent, presently includes 299 pollutants. They may be found at 43 FR 10474 (March 13, 1978) and 44 FR 10286 (February 16, 1979).

A number of these hazardous substances are compounds which dissociate in water. To obtain exclusions for these compounds, each ion resulting from the dissociation must be reported in this section of this Form.

Section 311(a)(2) of the Clean Water Act excludes the following from section 311 requirements: "(A) discharges in compliance with a permit under section 402 of this Act, (B) discharges resulting from circumstances identified and reviewed and made a part of the public record with respect to a permit issued or modified under section 402 of this Act, and subject to a condition in such permit, and (C) continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under section 402 of this Act, which are caused by events occurring within the scope of relevant operating or treatment systems."

For an in-depth discussion of these exclusions, refer to regulations proposed at 44 FR 10271 (February 16, 1979).

If you list and describe a hazardous substance in this question of the NPDES application form in order to avoid the penalties and requirements of section 311 of the CWA, then the discharge becomes subject to the NPDES requirements of the CWA. As a result, the permitting authority may set technology-based limitations in a permit under sections 301 and 304 of the CWA for the discharge of the pollutant; otherwise the application-based limitations specified in 40 CFR 122.68(a)(2) will apply.

In Order to be Excluded From § 311 Liability for Hazardous Substance Discharges, You Must Identify the Hazardous Substances in This Question and Complete all Parts of This Question.

Item IX–A. For each outfall or nonpoint source where you desire a discharge of a hazardous substance to be excluded from section 311 of the CWA, identify the point at which the discharge enters or will enter navigable waters (this may include nonpoint sources as well as outfalls). For each point of discharge, identify the hazardous substances which are or will be discharged. If you previously identified the substance elsewhere in

this Form, you must also identify it here to obtain an exclusion.

In the third column, identify the origin or source of the discharge of each hazardous substance you identified. If the discharge is or may be the result of normal process operations, indicate the process that is or may be generating the discharge. If the discharge is or may be the result of other causes, such as washdown of leaks and spills from storage areas, runoff and leachate from materials storage areas, or discharges that could be caused by tank ruptures or chemical spills, then specify the cause in detail.

In the fourth column, indicate the frequency that the pollutant is or is projected to be discharged, e.g., continuously, once a day, or potentially 3 times per year.

For each substance, indicate the amount of the substance that is or which may be discharged, based on the concentration of the substance and the highest expected flow. Base all your concentrations and mass figures on actual analyses if possible, but if the discharge is only a potential one or if it cannot be measured, use your best estimate. In the last column, identify the analytical method or the basis of the estimate used to develop the concentration and amount figures reported in the proceeding two columns.

Item IX–B. For each outfall or nonpoint source you listed in item IX–A, describe your present or planned treatment system or management practice to treat or eliminate the discharge. If any part of the treatment system is or will be installed specifically to control discharges identified in this item, this should be specified in the description. (Examples of a management practice are holding ponds to contain materials discharged from ruptured tanks, followed by treatment or disposal, and diversion of wastes by ditching around storage areas to facilitate collection, followed by treatment and disposal.)

Item X. Self explanatory.

Item XI. The Clean Water Act provides for severe penalties for submitting false information on this application form.

Section 309(c)(2) of the Clean Water Act provides that "Any person who knowingly makes any false statement, representation, or certification in any application, * * * shall upon conviction, be punished by a fine or no more than $10,000 or by imprisonment for not more than six months, or both."

FEDERAL REGULATIONS REQUIRE THIS APPLICATION TO BE SIGNED AS FOLLOWS:

(1) For a corporation, by a principal executive officer of at least the level of vice president;

(2) For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

This application is not considered to be complete until it is signed by the appropriate official.

FORM 3—RCRA: Hazardous Waste Management Facility Permit

Public availability of submitted information. Your answer to every question asked on this form is necessary to write a hazardous waste management (HWM) facility permit.

In general, all information contained in the HWM Facility Permit Application is considered to be open to the public. However, an applicant may claim confidential status for any information submitted to EPA pursuant to section 3005 of RCRA (proposed as 40 CFR Parts 122 and 124). Such claim must be made at the time of submission, by stamping the words "Confidential Business Information" on each page containing such material. If no claim is asserted, the information will be disclosed only in accordance with procedures established in Title 18 of the U.S. Code.

Definitions. Terms used in these instructions and in Form 3 are defined in the glossary found in section D of the instructions.

Applicants for special RCRA permits. Applicants for Health Care Facility Special Permits must complete *only* items I, II, III, IV, V, and VI on Form 1, and *only* items I, VII–A and VII–B on Form 3. Applicants for Experimental Facility Special Permits must complete all items in Form 1 and Form 3.

For additional definitions and procedures to use in applying for RCRA permits, refer to regulations pursuant to section 3005 of RCRA and proposed as 40 CFR Parts 122 and 124.

Item I. Enter the Facility Identification Number provided by EPA which can be found in the upper left hand corner of the label used to mail these forms to you. The Facility I.D. number for private, municipal, and State-owned facilities is the Data Universal Numbering System, or otherwise called the DUNS Number, developed by Dunn and Bradstreet, Inc.

In the event that EPA did not provide an I.D. number (DUNS Number) on your mailing label, one can be obtained by contacting your nearest office of Dunn and Bradstreet, Inc. or your EPA Regional office.

For Federal facilities, the General Services Administration (GSA) real property number is used in lieu of the DUNS Number. All Federal facilities have been assigned a real property number by GSA. In the event that EPA did not provide an I.D. number on your mailing label, one can be obtained by contacting the nearest local office of GSA.

Item II. Check the box that best describes the relationship of the applicant to the facility. Relevant definitions:

- Ownership—legal right to possession.
- Purchase—to acquire (property) legally by means other than inheritance.
- Rent—use of another's property in return for regular payments.
- Lease—a contract granting use or occupation of land or holdings during a specified period in exchange for rent.

In addition, modifications to RCRA permits are addressed in proposed § 122.9(e), which appears elsewhere in today's Federal Register. It should be noted that certain minor modifications listed under § 122.9(g) may not require public notice and opportunity for hearings.

Item III. Check the box that best describes the current status of the facility.

Item IV. Check the box that best describes the type of permit that is desired. The two types of permits that require applications are the following:

A. Regular Permits
B. Special Permits
- Experimental Facility
- Health Care Facility.

Note.—Permits by rule will be granted to facilities listed in § 122.26(a) of regulations pursuant to section 3005 of RCRA and proposed elsewhere in today's Federal Register. *No application* is required for permits by rule.

Item V. In the space provided, indicate:

A. The present zoing of the site.

B. What new zoning classification should be if a change is required.

Item VI. Only existing HWM facilities (see Glossary) are required to provide copies of all available drawings and specifications of the HWM facility, its processes, and equipment. Also indicate the *date* the HWM facility came into operation or under physical construction.

Item VII. Only owners/operators of health care facilities (HCF) that treat and/or store hazardous waste are

eligible for a special permit under section 3005 of RCRA. The following information must be provided:

A. A certification statement signed by appropriate State licensing authority indicating that the facility has an effective license as specified under § 122.25(a) of regulations pursuant to section 3005 of RCRA proposed elsewhere in today's Federal Register.

B. A list of hazardous wastes covered by the State license.

Item VIII. An authorized representative of the applicant should sign and date the permit application, thereby certifying to the validity of all responses and data submitted to EPA. Under section 3008(d) of RCRA, "Any person who knowingly makes any false statement or representation in any application, label, manifest, record, report, permit, or other document filed, maintained, or used for purposes of compliance with this subtitle shall, upon conviction, be subject to a fine of not more than $25,000 for each day of violation, or to imprisonment not to exceed 1 year, or both. If the conviction is for a violation committed after a first conviction of such a person under this paragraph, punishment shall be by a fine of not more than $50,000 per day of violation, or by imprisonment for not more than 2 years, or by both."

Item IX. Each of the following instructions apply specifically to each part of item IX.

A. *Waste number.* Wastes must be numbered sequentially beginning with number (1).

B. *Hazardous waste name.* Provide the proper Department of Transportation (DOT) shipping name of each hazardous waste that is stored, treated, or disposed of at the facility. The DOT proper shipping names are listed in the Code of Federal Regulations, 49 CFR 172.101 (proposed at 43 FR 22631 (May 25, 1978)). If the proper shipping name is not included in the DOT list and the term "Not Otherwise Specified" (NOS) is indicated, the EPA hazardous waste name as listed in 40 CFR 250.14 must be used after the DOT proper shipping name. Both references may be obtained by contacting the appropriate EPA Regional office responsible for issuing the permit. If the waste cannot be located in either of these lists, and it is determined to be a hazardous waste under the procedures established by the section 3001 regulations, then use the common name or chemical name of the waste, and so indicate by placing as asterisk (*) before the name of the waste.

If all wastes cannot be specified on a single sheet, additional copies may be requested from the solid waste representative in the EPA Regional office which is responsible for issuing hazardous waste management facility permits in your State.

C. *Confidentiality claim.* If you wish to claim confidential status for this information, mark an X in this box (see item titled *"Public Availability of Submitted Information"*).

D. *Waste definition code (common code).* Enter the waste definition code associated with each "hazardous waste name" listed in item IX-B. A unique code number has been assigned to each EPA hazardous waste listed in 40 CFR 250.14 and to each DOT hazardous waste material listed in 49 CFR 127.101 (proposed at 43 FR 22631 (May 25, 1978)).

Note.—These codes are *not* included in this notice, but they will be made part of EPA's final instruction manual.

E. *Hazard class.* List the hazard class by its Department of Transportation (DOT) category name, as identified or listed in the Hazardous Waste Materials Table in the *Code of Federal Regulations*, 49 CFR 172.101 (proposed at 43 FR 22631 (May 25, 1978)). For the DOT hazard class "OTHER REGULATED MATERIAL" (ORM), use the EPA characteristics identified in § 250.14 of regulations pursuant to section 3001 of RCRA and proposed as 40 CFR Part 250 in 43 FR 58957, December 18, 1978. The hazard class is simply a systematic means of identifying substances with similar characteristics.

Enter the assigned code listed below corresponding to the appropriate classification.

The DOT hazard classes and assigned codes are:

EA—Explosives A
EB—Explosives B
EC—Explosives C
FL—Flammable liquid
FS—Flammable solid
OX—Oxidizer
CL—Corrosive liquid
NG—Nonflammable gas
PA—Poison A
PB—Poison B
RM—Radioactive material
OP—Organic peroxide
CH—Chlorine
OL—Oxygen pressurized liquid.

The EPA classification system and data input codes includes:

I—Ignitable waste
C—Corrosive waste
N—Infectious waste
R—Reactive waste
A—Radioactive waste
T—Toxic waste
O—Organic toxicant
M—Mutagenic
B—Bioaccumulative

F. *Action code.* Indicate the type of action(s) or function(s) employed at the facility in relation to each hazardous waste. The appropriate code(s) are listed below:

S—Store hazardous waste
T—Treat hazardous waste
D—Dispose of hazardous waste

G. *Amount.* For each hazardous waste that the facility stores, treats, and/or disposes, indicate the quantity handled on an annual basis. Use the units of measure shown in (H) below.

H. *Unit of measure.* For each amount indicated, the units are to be specified using the abbreviations of English or metric units shown below:

English Units	*Metric Units*
P—Pounds	K—Kilograms
T—Tons	M—Tonnes
G—Gallons	L—Liters
Y—Cubic Yard	C—Cubic Meters

I. *Handling code.* Enter the handling code(s) listed below that most closely represent the technique(s) used at the facility to store, treat, or dispose of hazardous waste. For each hazardous waste, and for each applicable action code (see F above) enter the most appropriate handling code listed below. This code is intended to supplement (J) below, which is the handling technique

(1) Storage

S01 Tank truck/rail
S02 Missile silo
S03 Underground storage
S04 Concrete drum
S06 Other (specify)

(2) Treatment

(a) Thermal Treatment Process

T07 Modular incinerator
T08 Rotary kiln incinerator
T09 Fluidized bed incinerator
T10 Cement kiln incinerator
T11 Multiple hearth incinerator
T12 Electrical utility boiler
T13 Liquid injection incinerator
T14 Sludge incinerator
T15 Chemical waste incinerator
T16 Process heater
T17 Lime kiln
T18 Wood waste incinerator
T06 Other (specify)

(b) Chemical Treatment Process

T19 Cyanide destruction
T20 Chemical oxidation
T21 Chemical precipitation
T22 Chemical reduction
T23 Neutralization
T24 Pyrolysis
T25 Degradation
T26 Chlorination
T27 Chemical fixation
T28 Detoxification
T29 Absorption mound
T30 Absorption field
T31 Ion exchange
T06 Other (specify)

(c) Physical Treatment Process

1. Liquid-solids separation

T32 Centrifugation
T33 Clarification
T34 Filtration
T35 Flocculation
T36 Sedimentation
T37 Decanting
T38 Coagulation
T39 Flotation
T40 Foaming
T41 Thickening
T42 Open pit (seepage pit)*
T43 Concrete basin*
T44 Surface impoundment*
T45 Holding tank*
T06 Other (specify)

2. Removal of Specific Components

T46 Blending
T47 Catalysis
T48 Distillation
T49 Evaporation
T50 Solvent
T51 Stripping
T52 Absorption—molecular sieve (activated carbon)
T53 Crystallization
T54 Sand filter
T55 Dialysis
T56 Electrodialysis
T57 Leaching
T58 Reverse osmosis
T06 Other (specify)

(d) Biological Treatment

T59 Activated sludge
T60 Aerobic lagoons
T61 Anaerobic lagoons
T62 Spray irrigation
T63 Thickening filters
T64 Waste stabilization pond
T65 Septic tank*
T66 Aerobic tank*
T06 Other (specify)

(e) Other

T67 Electron irradiation
T68 Air stripping
T06 Other (specify)

(3) Disposal

D69 Chemical waste landfill
D70 Soil incorporation
D71 Ocean disposal
D72 Deep well injection
D73 Dilution/dispersion
D74 Open burning/burial
D75 Encapsulation
D76 Open pit
D77 Encasement (cement)
D78 Missile silo*
D79 Waste digestor
D80 Cave
D06 Other (specify).

*These techniques are considered *storage* if they are covered and there is no discharge to air or groundwater.

J. *Hazardous waste handling technique.* Briefly describe the technique used at the facility in storing, treating, or disposing of hazardous wastes. For each different material and action, identify the specific technique used. Example responses include the following:

- Sink-float separation; decant and evaporate.
- Shredding, rotary kiln incineration, dispose residuals in hazardous waste landfill.
- Evaporation, centrifuge and pyrolysis.
- Containerize in steel drums and cover with earth.
- Containerize and store in missile silo.
- Neutralize hazardous solution and reprocess.
- Use ion exchange resin; recover concentrates.

Form 4—UIC: Underground Injection of Fluids [Reserved]

Form 5—PSD: Proposed Facilities (PSD New Sources, NPDES New Sources and New Dischargers, and New Injection Wells) [Reserved]

Section C. Activities Which Do Not Require Permits

I. *National Pollutant Discharge Elimination System (NPDES) Permits under the Clean Water Act.* You are not required to obtain an NPDES permit if your discharge is in one of the following categories, as provided by the Clean Water Act (CWA) and by the NPDES regulations (40 CFR Parts 122–125, promulgated on June 7, 1979). However, under section 510 of the CWA, a discharge exempted from NPDES requirements may still be regulated by a State authority and so you should check with your State environmental agency to determine whether you need a State permit.

A. *Discharges from Vessels.* Discharges of sewage from vessels, effluent from properly functioning marine engines, laundry, shower, and galley sink wastes, and any other discharge incidental to the normal operation of a vessel do not require NPDES permits. However, discharges of rubbish, trash, garbage, or other such materials, discharged overboard do require permits, and so do other discharges when the vessel is operating in a capacity other than as a mean of transportation, such as when the vessel is being used as an energy of mining facility, a storage facility, or a seafood processing facility, or is secured to the bed of the ocean, contiguous zone, or waters of the United States for the purpose of mineral or oil exploration or development.

B. *Dredged or Fill Material.* Discharges of dredged or fill material into waters of the United States do not need NPDES permits if the dredging or filling is regulated under section 404 of the CWA.

C. *Discharges into Publicly Owned Treatment Works (POTW).* The introduction of sewage, industrial wastes, or other pollutants into a POTW does not need an NPDES permit. You must comply with all applicable pretreatment standards promulgated under section 307(b) of the CWA, which may be included in the permit issued to the POTW. If you have a plan or an agreement to switch to a POTW in the future, this does not relieve you of the obligation to apply for and receive an NPDES permit until you have stopped discharging pollutants into waters of the United States. Also, you do need an NPDES permit for introduction of pollutants to privately owned treatment works which discharge into waters of the United States, and for other discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other party not leading to treatment works.

D. *Discharges from Agricultural and Silvicultural Activities.* Any indroduction of pollutants to waters of the United States from agricultural and silvicultural activities, except as described below, does not require an NPDES permit. This includes runoff from orchards, cultivated crops, pastures, range lands, and forest lands, but does not include the exceptions described below.

(1) Discharges from Concentrated Animal Feeding Operations.

A lot or facility is an animal feeding operation if it meets the following conditions:

(i) Animals (other than acquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and

(ii) Crops, vegetation, forage growth or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

Two or more animal feeding operations under common ownership are a single animal feeding operation if they adjoin each other or if they use a common area or system for disposal of wastes.

An animal feeding operation is required to have an NPDES permit if it is a "concentrated animal feeding operation", which means that it has been designated as a "concentrated animal feeding operation" under 40 CFR 122.76(c), or that it meets one of the criteria in (i) or (ii) below:

(i) More than the numbers of animal specified in any of the following categories are confined:

(A) 1,000 slaughter and feeder cattle,
(B) 700 mature dairy cattle (whether milked or dry cows),
(C) 2,500 swine each weighing over 55 pounds,
(D) 500 horses,
(E) 10,000 sheep or lambs,
(F) 55,000 turkeys,
(G) 100,000 laying hens or broilers (if the facility has continuous overflow watering)
(H) 30,000 laying hens or broilers (if the facility has a liquid manure handling system),
(I) 5,000 ducks, or
(J) 1,000 animal units (see definition below); or

(ii) One of the following conditions are met: Pollutants are discharged into water of the United States through a man-made ditch, flushing system or other similar man-made device; or pollutants are discharged directly into navigable waters which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation; and more than the following numbers and types of animals are confined:
(A) 300 slaughter or feeder cattle,
(B) 200 mature dairy cattle (whether milked or dry cows),
(C) 750 swine each weighing over 55 pounds,
(D) 150 horses,
(E) 3,000 sheep or lambs,
(F) 16,500 turkeys,
(G) 30,000 laying hens or broilers (if the facility has continuous overflow watering),
(H) 9,000 laying hens or broilers (if the facility has a liquid manure handling system),
(I) 1,500 ducks, or
(J) 300 animal units (see definition below).

No animal feeding operation is a concentrated animal feeding operation as defined above if such animal feeding operation discharges only in the event of a 25 year, 24 hour storm.

The term "animal unit" means a unit of measurement for any animal feeding operation calculated by adding the following numbers: The number of slaughter and feeder cattle multiplied by 1.0, plus the number of mature dairy cattle multiplied by 1.4, plus the number of swine weighing over 55 pounds multiplied by 0.4, plus the number of sheep multiplied by 0.1, plus the number of horses multiplied by 2.0.

(2) Discharges from Concentrated Aquatic Animal Production Facilities.

An aquatic animal production facility is required to have an NPDES permit if it is a "concentrated aquatic animal production facility", as defined below or as designated under 40 CFR 122.77(c).

"Concentrated aquatic animal production facility" means a hatchery, fish farm, or other facility which contains, grows, or holds:

(i) Cold water fish species or other cold water aquatic animals in ponds, raceways or other similar structures which discharge at least 30 days per year but does not include:

(a) Facilities which produce less than 20,000 harvest weight pounds of aquatic animals per year; and

(b) Facilities which feed less than 5,000 pounds of food during the calendar month of maximum feeding.

(ii) Warm water fish species or other warm water aquatic animals in ponds, raceways or other similar structures which discharge at least 30 days per year, but does not include:

(a) Closed ponds which discharge only during periods of excess runoff; or

(b) Facilities which produce less than 100,000 harvest weight pounds of aquatic animals per year.

"Cold water aquatic animals" include, but are not limited to, the *Salmonidae* family of fish, e.g., trout and salmon.

"Warm water aquatic animals" include, but are not limited to, the *Ameiuridae, Centrarchidae,* and *Cyprinidae* families of fish, e.g., respectively catfish, sunfish and minnows.

(3) Discharges to Aquaculture Projects.

Discharges to aquaculture projects, as defined below, require NPDES permits.

"Aquaculture project" means a defined managed water area which uses discharges of pollutants into that designated area for the maintenance or production of harvestable freshwater, estuarine, or marine plants or animals.

"Designated project area" means the portions of the waters of the United States within which the applicant for a permit plans to confine the cultivated species, using a method or plan or operation (including, but not limited to, physical confinement) which, on the basis of reliable scientific evidence, is expected to ensure that specific individual organisms comprising an aquaculture crop will enjoy increased growth attributable to the discharge of pollutants permitted under this part, and be harvested within a defined geographic area.

(4) Discharges from Silvicultural Point Sources.

Discharges from non-point source silvicultural activities do not require NPDES permits. These activities include nursery operations, site preparations, reforestation and subsequent cultural treatment, thinning, prescribed burning, pest and fire control, harvesting operations, surface drainage, and road construction and maintenance from which there is runoff from precipitation. However, some of these activities, such as stream crossings for roads, may involve point source discharges of dredged or fill material which may require a section 404 permit. See 33 CFR 209.120.

Discharges from silvicultural point sources do require NPDES permits. A silvicultural point source is any discernable, confined, and discrete conveyance which discharges pollutants into waters of the United States and which is related to rock crushing and gravel washing facilities, or to log sorting and log storage facilities, as defined below, which are operated in connection with silvicultural activities.

"Rock crushing and gravel washing facilities" are facilities which process crushed and borken stone, gravel and riprap (see 40 CFR Part 436, Subpart B, and the effluent limitations guidelines for these facilities).

"Log sorting and log storage facilities" are facilities whose discharges result from the holding of unprocessed wood, e.g., logs or roundwood with bark or after removal of bark in self-contained bodies of water (mill ponds or log ponds) or stored on land where water is applied intentionally on the logs (wet decking). (See 40 CFR Part 429, Subpart J, and the effluent limitations guidelines for these facilities.)

II. *Hazardous Waste Permits Under the Resource Conservation and Recovery Act (RCRA).* You are not required to obtain an RCRA Subtitle C permit, if you are in one of the following categories:

(1) Generators and transporters who store hazardous waste for less than 90 days.

(2) Persons who produce and dispose of less than 100 kilograms (approximately 220 pounds) per month of hazardous waste. Persons are exempted provided they comply with the provisions of 40 CFR 250.29—Standards Applicable to Generators of Hazardous Waste (proposed at 43 FR 58979 on December 18, 1978). These provisions require that any hazardous waste generated, no matter how small the quantity, be disposed of either in (i) a solid waste facility which has been permitted or otherwise certified by the State as meeting the criteria of section 4004 of RCRA; or (ii) a treatment, storage, or disposal facility permitted by the Director under 40 CFR Parts 124 and 125, or permitted by an authorized State program under 40 CFR Part 123.

(3) Retailers who dispose of any quantity of hazardous waste other than waste oil. This exclusion only applies if the hazardous waste is disposed of in accordance with the provisions of 40 CFR 250.29 (described in (2) above). This exclusion does not extend to gasoline stations and companies that accumulate more than 100 kilograms of waste oil per month.

(4) Farmers who dispose of any quantity of hazardous waste: *Provided,* That they comply with the provisions of 40 CFR 240.29. These provisions require farmers to (i) dispose of all waste pesticide in accordance with instructions on the pesticide label or, in the absence of label instructions, dispose of the pesticide in accordance with the procedures and criteria specified in 40 CFR Parts 165 and 257; and (ii) triple rinse each pesticide container after it has been emptied and use the rinsate as make-up water in the tank mix or, at an application rate consistent with pesticide labeling, on crop lands: *Provided, however,* That the pesticide must be registered for the particular crops and such application must be consistent with criteria established in 40 CFR Part 257; and (iii) dispose of all other hazardous wastes in accordance with the provisions described in (2) above.

(5) Publicly owned treatment works (POTW), ocean disposal barges or vessels that receive manifested hazardous wastes and facilities that treat, store or dispose of hazardous wastes designated as special waste as defined in 40 CFR 240.46 shall be considered as having a permit if the requirements proposed in 40 CFR 122.26 are met. Therefore, the owners and operators of these facilities do not need to apply for an RCRA permit.

III. *Underground Injection Control Permits Under the Safe Drinking Water Act.* [Reserved]

IV. *Prevention of Significant Deterioration Permits Under the Clean Air Act.* [Reserved]

Section D. Glossary

Note.—This Glossary includes terms used in the instructions and in Forms 1, 2b, 2c, and 3. Additional terms will be included in the future when other forms are developed to reflect the requirements of other parts of the consolidated permit program.

"Aliquot" means a sample of specified volume used to make up a total composite sample.

"Animal feeding operation" means a lot or facility (other than an aquatic animal production facility) where the following conditions are met:

(i) Animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and

(ii) Crops, vegetation, forage growth or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

Two or more animal feeding operations under common ownership are a single animal feeding operation if they adjoin each other or if they use a common area or system for the disposal of wastes.

"Animal unit" means a unit of measurement for any animal feeding operation calculated by adding the following numbers: The number of slaughter and feeder cattle multiplied by 1.0 plus the number of mature dairy cattle multiplied by 1.4 plus the number of swine weighing over 55 pounds multiplied by 0.4, plus the number of sheep multiplied by 0.1, plus the number of horses multiplied by 2.0.

"Application" means the EPA standard national forms for applying for a permit, including any subsequent additions, revisions or modifications to the form; or forms approved by EPA for use in approved States, including any approved modifications or revisions.

"Application, Part A" means that part of the consolidated permit application form which an RCRA permit applicant must complete to qualify for interim status under section 3005(e) of RCRA and for consideration for a permit. Part A consists of Form 1 (General Information) and Form 3 (Hazardous Waste Information Summary).

"Application, Part B", means that part of the application which an RCRA permit applicant must complete to be considered for a permit. EPA is not developing a specific form for Part B of the permit application.

"Approved program" means a State program which meets the requirements of 40 CFR Part 123 and which has been submitted to and approved by EPA under the appropriate Act. An "approved State" is one administering an "approved program."

"Aquifer" means a geological formation, group of formations, or part of a formation that is capable of yielding useable quantities of groundwater.

"Area of review" means the area surrounding an injection well which is described according to the criteria set forth in 40 CFR 146.06.

"Area permit" means a UIC permit applicable to a geographical area, rather than to a specified well, under 40 CFR 122.37.

"Attainment area" means for any air pollutant, an area which is shown by monitored data or which is calculated by air quality modeling (or other methods determined by the Administrator to be reliable) not to exceed any national air quality standard for such pollutant. Standards have been set for sulfur oxides, particulate matter, nitrogen dioxide, carbon monoxide, ozone, lead and hydrocarbons.

"Authorization" means authorization, or approval by EPA of a State program which has met the applicable requirements of section 3006(b) of RCRA and 40 CFR Part 123, Subparts A & B.

"Batch" process or operation means a process or operation which occurs as a series of single, discrete operations.

"Best Management Practices" ("BMP") means methods, measures, or practices to prevent or reduce the contribution of pollutants to waters of the United States. For purposes of these forms and instructions, BMPs include treatment requirements, operating and maintenance procedures, schedules of activities, prohibitions of activities, and other management practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs do not include actual plant process design, and related operating decisions. BMPs may be imposed in addition to or in the absence of effluent limitations, standards or prohibitions.

"Biological monitoring test" means any test which includes the use of aquatic algal, invertebrate, or vertebrate species to measure acute or chronic toxicity, and any biological and/or chemical measure of bioaccumulation.

"Bypass" means the intentional diversion of wastes from any portion of a treatment facility.

"Composite sample" is a sample made up of a number of individual aliquots collected over a period of time.

"Concentrated animal feeding operation" means an animal feeding operation which meets the criteria set forth in (b)(2)(i), (ii) or (iii) below:

(i) More than the numbers of animal specified in any of the following categories are confined:

(A) 1,000 slaughter or feeder cattle,

(B) 700 mature dairy cattle (whether milked or dry cows),

(C) 2,500 swine each weighing over 55 pounds,

(D) 500 horses,

(E) 10,000 sheep or lambs,

(F) 55,000 turkeys,

(G) 100,000 laying hens or broilers (if the facility has a continuous overflow watering)

(H) 30,000 laying hens or broilers (if the facility has a liquid manure system),

(I) 5,000 ducks, or

(J) 1,000 animal units; or

(ii) More than the following numbers and types of animals are confined:

(A) 300 slaughter or feeder cattle,

(B) 200 mature dairy cattle (whether milked or dry cows),

(C) 750 swine each weighing over 55 pounds,

(D) 150 horses,

(E) 3,000 sheep or lambs,

(F) 16,500 turkeys,

(G) 30,000 laying hens or broilers (if the facility has continuous overflow watering),

(H) 9,000 laying hens or broilers (if the facility has a liquid manure handling system),

(I) 1,500 ducks, or

(J) 300 animal units;

and either one of the following conditions are met: Pollutants are discharged into water of the United States through a man-made ditch, flushing system or other similar man-made device; or pollutants are discharged directly into navigable waters which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.

Provided, however, That no animal feeding operation is a concentrated animal feeding operation as defined above if such animal feeding operation discharges only in the event of a 25 year, 24 hour storm event; or

(iii) The Director determines that the operation is a significant contributor of pollution to waters of the United States, in accordance with 40 CFR 122.76(c).

"Concentrated aquatic animal production facility" means a hatchery, fish farm, or other facility which contains, grows or holds:

(i) Cold water fish species or other cold water aquatic animals in ponds, raceways or other similar structures which discharge at least 30 days per year but does not include:

(i) Facilities which produce less than 20,000 harvest weight pounds of aquatic animal per year; and

(ii) Facilities which feed less than 5,000 pounds of food during the calendar month of maximum feeding.

(2) Warm water fish species or other warm water aquatic animals in ponds, raceways or other similar structures which discharge at least 30 days per year, but does not include:

(i) Closed ponds which discharge only during periods of excess runoff; or

(ii) Facilities which produce less than 100,000 harvest weight pounds of aquatic animals per year.

"Contact cooling water" means water used to reduce temperature which comes into contact with a raw material, intermediate product, waste product, or finished product.

"Contiguous zone" means the entire zone established by the United States under article 24 of the convention of the Territorial Sea and the Contiguous Zone.

"Continuous discharge" means a discharge which occurs without interruption, except for infrequent shutdowns for maintenance, process changes or other similar activities throughout the operating hours of the facility.

"CWA" means the Clean Water Act (formerly referred to the Federal Water Pollution Control Act) Pub. L. 92–500, as amended by Pub. L. 95–217 and Pub. L. 95–576, 33 U.S.C. 1251 *et seq.*

"Detection limit" means the lowest concentration of a substance that has a signal-to-noise ratio of five-to-one or less.

"Direct discharge" means the discharge of pollutants as defined below.

"Director" means the Regional Administrator, or the State Director as defined in this section.

[Comment: Where there is an approved State program, the term "Director" normally refers to the State Director. In some circumstances, however, EPA retains authority to take certain actions even where there is an approved State program; e.g., where EPA issued an NPDES permit prior to the approval of a State program, EPA may retain jurisdiction over that permit after program approval. See 40 CFR 123.71 and 123.91. In such cases, the term "Director" means the Regional Administrator and not the State Director.]

"Discharge" when used without qualification includes a discharge of a pollutant and a discharge of pollutants.

"Discharge of a pollutant" and "discharge of pollutants" each means:

(i) Any addition of any pollutant or combination of pollutants to navigable waters other than the territorial sea, from any point source, or

(ii) Any addition of any pollutant or combination of pollutants to the waters of the territorial sea, the contiguous zone or the ocean from any point source other than a vessel or other floating craft when being used as a means of transportation.

This definition includes discharges into waters of the United States from: surface runoff which is collected or channelled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other party which do not lead to treatment systems; and discharges through pipes, sewers, or other conveyances, leading into treatment systems owned in whole or in part by a third party other than a State or a municipality.

"Disposal" means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste into or on any land or water so that such solid waste or hazardous waste or any constitutent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwaters.

"Disposal facility" means any Hazardous Waste Management facility which disposes of hazardous waste.

"Effective date of a UIC program" means the date that a State UIC program is approved or the date that a UIC program is established by the Administrator.

"Effluent limitation" means any restriction imposed by a State or the Administrator on quantities, rates, and concentrations of pollutants which are discharged from point sources into navigable waters or the waters of the continguous zone or the ocean.

"Environmental Protection Agency" ("EPA") means the United States Environmental Protection Agency.

"Existing HWM facility" means a Hazardous Waste Management facility which was in operation or under physical construction, on or before the date or promulgation of the regulations under § 3001 of RCRA, 40 CFR Part 250, Subpart A (proposed at 43 FR 58954 (December 18, 1978)).

"Existing source" means any source which is not a new source or a new discharger.

"Existing injection wells" means all injection wells other than new injection wells as defined in this Glossary.

"Facilities or equipment" means buildings, structures, process or production equipment or machinery which form a permanent part of the new source and which will be used in its operation, provided that such facilities or equipment are of such value as to represent a substantial commitment to construct. It does not include facilities or equipment used in connection with feasibility, engineering and design studies regarding the pollution treatment for the source.

"Facility or activity" means any activity or facility (including land or appurtenances thereto) this is subject to regulation under the RCRA, UIC, or NPDES programs.

"Farmer" means a person whose principal business is operating a farm.

which is a piece of land on which crops or animals are raised.

"Fluid" means material or substance which flows or moves whether semisolid, liquid, sludge or any other form or state.

"General information form" or "Form 1" means the consolidated permit application form containing general information which is common to several EPA permit programs.

"Generator" means any person or Federal agency whose act or process produces hazardous waste identified or listed under 40 CFR Part 250, §§ 250.13 and .14 (proposed at 43 FR 58955 (December 18, 1978)). Certain producers are specifically exempted from the § 3002 regulations. These are discussed in section C of the instructions and in 40 CFR Part 250, § 250.29 (proposed at 43 FR 58979 (December 18, 1978)).

"Grab composite sample" means a combination of grab samples collected over a specified sampling period.

"Grab sample" means an individual sample collected at a randomly—selected time over a period of time not exceeding 15 minutes.

"Group I industry" means any of the industries listed in Table 4 of the instructions as being in Group I.

"Group II industry" means any industry listed in Table 4 of the instructions as being in Group II.

"Gross limitation" means a limitation which is not adjusted to reflect credit for pollutants in a discharger's intake water.

"Ground water" means water in the saturated zone beneath the land surface.

"Hazardous substance" means any of the substances designated as hazardous in 40 CFR Part 116.

"Harzardous waste" means a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed; or as further defined and identified by 40 CFR Part 250, Subpart A, §§250.13 and .14 (proposed at 43 FR 58955 (December 18, 1978)).

"Hazardous waste management facility" ("HWM facility") means any facility, land and appurtenances thereto used for the treatment, storage, and/or disposal of hazardous wastes except that solid waste disposal facilities which receive hazardous wastes only from persons subject to 40 CFR 250.29 shall not be considered HWM facilities.

[*Comment:* Persons subject to 40 CFR 250.229 are those who produce and dispose of no more than 100 kilograms (approximately 220 pounds) of hazardous wastes in any one month, retailers who dispose of hazardous wastes other than waste oil, and farmers who dispose of pesticides which are hazardous and who follow certain specified operating procedures.]

"In operation" applies to Hazardous Waste Mangement facilities actively treating, storing or disposing of hazardous waste.

"Indirect discharger" means a non-municipal, non-domestic discharger introducing pollutants to a publicly owned treatment works which introduction does not constitute a "discharge of pollutants."

"Injection" means the subsurface emplacement of fluids through a well.

"Injection well" means a well into which well injection occurs, including 21 types of injection wells covered by the UIC program which are divided into the classes in 40 CFR 123.34.

"Interim authorization" refers to authorization or approval by EPA of a State program which has met the applicable requirements of section 3006(c) of RCRA and 40 CFR Part 123, Subparts A and B.

"Listed State" means a State listed by the Administrator under section 1422 of the SDWA as needing a State UIC program.

"Man-made" means constructed by man and used for the purpose of transporting wastes.

"Mgd" means millions of gallons per day.

"Municipality" means a city, village, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisidicition over disposal of sewage, industrial wastes, or other waste, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA.

"Lease" means a contract granting use or occupation of land or holdings during a specified period in return for rent.

"National Pollutant Discharge Elimination System" ("NPDES") means the national program for issuing, conditioning, modifying, revoking, denying, monitoring, and enforcing permits for the discharge of pollutants from point sources into the waters of the United States under sections 402, 318, and 405 of the CWA. The term includes any State of inter-state program which has been approved by the Administrator under section 208 of the CWA.

"Navigable waters" means "waters of the United States, including the territorial seas." This term includes:

(1) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(2) Interstate water, including interstate wetlands;

(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats and wetlands, the use, degradation or destruction of which affect or could affect interstate or foreign commerce including any such waters:

(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes;

(ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce;

(iii) Which are used or could be used for industrial purposes by industries in interstate commerce;

(4) All impoundments of waters otherwise defined as navigable waters under this paragraph;

(5) Tributaries of waters identified in paragraphs (1)–(4) of this section, including adjacent wetlands; and

(6) Wetlands adjacent to waters identified in paragraphs (1)–(5) of this section: *provided,* That waste treatment systems (other than cooling ponds meeting the criteria of this paragraph) are not waters of the United States.

[*Comment:* For purposes of clarity the term "waters of the United States" is primarily used throughout the form and instructions rather than "navigable waters."]

"Net" limitations are effluent limitations which are adjusted to reflect credit for pollutants in a discharger's intake water.

"New discharger" means any building, structure, facility or installation: (1) Which on October 18, 1972, had never discharged pollutants; (2) which has never received a finally effective NPDES permit; (3) from which there is or may be a new or additional discharge of pollutants; and (4) which does not fall within the definition of "new source".

"New HWM facility" means a Hazardous Waste Management facility which does not meet the definition of an existing facility as defined in this Glossary.

"New injection wells" means those wells which begin injection after an applicable UIC program becomes effective in the State.

"New source" means any building, structure facility or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

(i) After promulgation of standards of performance under section 306 of the Clean Water Act which are applicable to such source, or

(ii) After proposal of standards of performance under section 306 of the Clean Water Act which are applicable to such source, but only if the standards are promulgated within 120 days of their proposal.

[*Comment:* See 40 CFR 122.61 for the criteria and standards to be used in determining whether a source has begun construction within the measuring of this definition, for the types of construction activities which result in new sources or new discharges, and for the effect of a new source or new discharger determination.]

"Non-contact cooling water" means water used to reduce temperature which does not come into direct contact with any raw material, intermediate product, waste product, or finished product.

"Nonpoint source" means any source of discharge to waters of the United States which is not a point source.

"Off-site" means any site that does not meet the definition of "on-site" as defined in this Glossary.

"On-site" means on the same or geographically contiguous property. Two or more pieces of property which are geographically contiguous and are divided by public or private right(s)-of-way are considered a single site.

"Outfall" means a point source as defined in this Glossary.

"Owner or operator" means the owner or operator of any facility or activity subject to regulation under the RCRA, UIC or NPDES programs. Where a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit.

"Ownership" means the legal right to possession.

"Permit" means a permit or equivalent control document issued by EPA or an approved State. In 40 CFR Part 124, references to "permit" may include permit modification, revocation or denial.

"Physical construction" means excavation, movement of earth, erection of forms or structures, the purchase of equipment of any other activity involving the actual preparation of the facility to treat, store or dispose of hazardous waste.

"Point source" means any discernible, confined conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

"Pollutant" means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical waste, biological materials, radioactive materials, heat, wrecked or discarded equipment, rocks, and, cellar dirt, and industrial, municipal, and agriculture waste discharged into water. It does not mean:

(1) Sewage from vessels; or

(2) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposal of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if such State determines that such injection or disposal will not result in the degradation of ground or surface water resources.

[*Comment:* The legislative history of the CWA indicates that "radioactive materials" as included within the definition of "pollutant" in section 502 of the CWA means only radioactive materials which are not encompassed in the definition of source, byproduct, or special nuclear materials defined by the Atomic Energy Act (AEA) of 1954, as amended, and regulated under the AEA. Examples of radioactive materials not covered by the AEA and, therefore, included within the term "pollutant" are radium and accelerator producted isotopes. See *Train* v. *Colorado Public Interest Research Group, Inc.* 426 U.S. 1 (1976).]

"Prevention of significant deterioration" (PSD) means the national permitting program under section 165 of the Clean Air Act (CAA) (42 U.S.C. 1857 et seq.), to prevent emissions of any pollutant regulated under the CAA from significantly deteriorating air quality in areas where the concentration of pollutant is lower than the applicable National Ambient Air Quality Standard.

"Process wastewater" means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product.

"Publicly owned treatment works" or "POTW" means a treatment works as defined in section 212 of the Clean Water Act (CWA), which is owned by a State or municipality (as defined by section 502(4) of the CWA). This definition includes any sewers that convey waste water to such a treatment works, but does not include pipes, sewers or other conveyances not connected to a facility providing treatment.

"Purchase" means to acquire (property) legally by means other than inheritance.

"Retailer" means a person engaged wholly in the business of selling directly to a consumer.

"Rent" means use of another's property in return for regular payment.

"RCRA" means the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976 (Pub. L. 94–580, as amended by Pub. L. 95–609).

"Sanitary Wastes" means human body wastes and wastes from toilets and other receptacles intended to receive or retain domestic wastes, including showers.

"Schedule of compliance" means a schedule of remedial measures including an enforceable sequences of actions, operations, or milestone events leading to compliance with the appropriate Act and regulations.

"SDWA" means the Safe Drinking Water Act (Pub. L. 95–523, as amended by Pub. L. 95–1900).

"SDWA pollutant" means any pollutant for which a Primary Drinking Water Standard has been issued under 40 CFR Part 141.

"Separate storm sewer" means a conveyance or system of conveyances (including but not limited to pipes, conduits, ditches, and channels) primarily used for collecting and conveying storm water runoff and either:

(i) Located in an urbanized area as designed by the Bureau of Census according to the criteria in 39 FR 15202 (May 1, 1974); or

(ii) Not located in an urbanized area as designed by the Bureau of Census according to the criteria in 39 FR 15202 May 1, 1974); or

The term "separate storm sewer" does not include any conveyance which discharges process water or storm water runoff contaminated by contact with wastes, raw materials, or pollutant contaminated soil, from lands or facilities used for industrial or commercial activities, into waters of the United States or into separate storm sewers. Such discharges are subject to the general provisions of 40 CFR 122.45.

"Sewage from vessels" means human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes that are discharged from vessels and regulated

under section 312 of the CWA, except that with respect to commercial vessels on the Great Lakes this term includes graywater. For the purposes of this definition "graywater" means galley, bath, and shower water.

"Sewage sludge" means the solids, residues, and precipitate separated from or created in sewage by the unit processes of a publicly owned treatment works. "Sewage" as used in this definition means any wastes, including wastes from humans, households, commercial establishments, industries, and storm water runoff, that are discharged to or otherwise enter a publicly owned treatment works.

"Site" means the land or water area upon which an activity is physically conducted or located, including but not limited to adjacent land used for utility systems, as repair, storage, shipping or processing areas or other areas incident to the control process or activity.

"Solid waste" means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Clean Water Act, or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).

"Source" means any building, structure, facility or installation from which there is or may be a discharge or emission of pollutants.

"State" means any of the 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, the Trust Territory of the Pacific Islands (except in the case of RCRA), and the Northern Mariana Islands (except in the case of CWA).

"Stationary Source" means any building, structure, facility, installation, or operation (or combination thereof) which is located on one or more contiguous or adjacent properties, which is owned or operated by the same person (or by persons under common control) and which emits or may emit any air pollutant.

"Storage" means the containment of hazardous waste, either on a temporary basis or for a period of years, in such a manner as not to constitute disposal of such hazardous wastes.

"Storage facility" means any Hazardous Waste Management facility which stores hazardous waste, except for generators who store their own wastes on-site for less than 90 days for subsequent transport off-site, in accordance with regulations in 40 CFR Part 250, § 250.20(c)92) (proposed at 43 FR 58976 (December 18, 1978)).

"Storm water runoff" means water discharged as a result of rain, snow, or other precipitation.

"Toxic pollutant" means any pollutant listed under section 307(a) of the CWA.

"Transporter" means a person or Federal Agency engaged in the transportation of hazardous waste by air, rail, highway or water.

"Treatment" when used in connection with treatment of hazardous waste, means any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste or so as to render such waste nonhazardous, safer for transport, amenable for recovery, amenable for storage or reduced in volume. Such term includes any activity or processing designed to change the physical form or chemical composition of hazardous waste so as to render it nonhazardous.

"Treatment facility" means any hazardous waste management facility which treats hazardous waste.

"Underground injection" means the subsurface emplacement of fluids by well injection, as defined by this Glossary.

"Underground source of drinking water" or "USDW" means any underground aquifer not identified by the Director as a non-USDW in accordance with 40 CFR 146.4.

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

"Waters of the United States" means navigable waters, as defined in this Glossary.

"Well injection" means the subsurface emplacement of fluids through a bored, drilled or driven well; or through a dug well, where the depth of the dug well is greater than the largest surface dimension, whenever a principal function of the dug well is the subsurface emplacement of fluids.

"Wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include playa lakes, swamps, marshes, bogs, and similar areas such as sloughs, prairie potholes, wet meadows, prairie river overflows, mudflats, and natural ponds.

Section E. NPDES Sampling and Analytical Methods

I. *Sampling.* EPA has not yet promulgated many sampling methodologies under section 304(h) of the CWA. This section gives some general guidance on good sampling techniques; contact your EPA or State permitting authority for more detailed guidance or for answers to specific questions. Where the approved methods referenced in Table 5 include requirements on how samples should be collected and preserved, follow the requirements whenever you use those methods.

A. *General considerations.* 1. Choose a time for sampling that is representative of your normal operation. All operations and processes which contribute wastewater should be in normal operation, to the extent feasible. Also, your treatment system should be operating properly with no system upsets.

2. The sample should be collected where the wastewater is well mixed: near the center of the flow channel, where turbulence is at a maximum.

3. The location for sampling should be adequate for the collection of a representative sample; the site specified in the permit if there is one.

4. Sampling for ponds and lagoons should be by composite samples unless past studies have proved that the retention time is long enough that the discharge is homogeneous.

5. The volume of the collected sample should be sufficient to perform all required analyses, including quality control and split sampling. Consult the laboratory receiving the sample and the methods in Table 5 for specific volume requirements.

6. Sample containers must be made of appropriate materials and cleaned thoroughly to prevent any contamination or change in volume of the sample. See the methods in Table 5 for specific requirements.

7. All samples must be preserved by refrigeration at 4°C from the time of collection (and during collection for composite samples) until the time of analysis.

B. *Types of Samples.* 1. Grab—An individual sample collected at a randomly-selected time over a period of time not exceeding 15 minutes. The sample volume must be at least 100 ml, and adequate for all required analyses. Grab samples are analyzed separately, and the average is computed with flow-weighted values.

2. Grab composite—A series of grab samples collected over the sampling period, and composited prior to analysis. For volatile organic toxics, follow the compositing method in the appropriate methods in Table 5.

3. 24-hour composite—A composite of samples collected at periodic intervals, over a 24-hour period. The composite must be flow proportional, with either the time interval between aliquots or the volume of aliquots proportional to the stream flow at the time of sampling, or to the total stream flow since the last aliquot. The number of aliquots shall be no less than eight, and in all cases as specified by the methods in Table 5. The minimum volume of each aliquot is 100 ml. The sample collection may be done either by manually collecting the periodic aliquots or by using an automatic sampler. More than eight aliquots will be required when the wastewater loading is highly variable.

For periods of flow less than 24 hours, collect flow proportional aliquots over the entire period of flow, with no less than eight aliquots.

4. 72-hour composite—May be collected in the following three ways:

a. A continuous composite, wth the same requirements as specified in (3) above for 24-hour composites, except that there shall be no less than 24 aliquots collected in the 72-hour period; or

b. Three consecutive 24-hour composites collected as specified in (3) above, combined prior to analysis in either equal volumes or flow proportional volumes; or

c. For non-volatile organic toxic pollutants, three consecutive 24-hour composites collected as specified in (3) above, each extracted with methylene chloride according to the methods in Table 5 at the conclusion of each 24-hour compositing period, with the three extracts combined for further sample preparation and analysis.

II. *Analytical Methods.* The following table represents the analytical methods promulgated under 40 CFR Part 136 as of May 1979. Revisions and additions to the methods will be proposed starting in Summer 1979 (see footnote 14), and when these changes are final, they will be incorporated into the table.

The following table has been included in these instructions for the convenience of permit applications, but it does not consititute the official listing of approved methods. Refer to 40 CFR Part 136 for the complete listing, which includes a brief description of each method, as well as some further details of analytical procedures in footnotes.

Alternate test procedures to those listed here and in 40 CFR Part 136 may be approved for use on an individual basis or for nationwide use. Refer to 40 CFR Part 136 for prodedures and requirements concerning application for approval of alternate test procedures.

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TABLE 5

PROMULGATED ANALYTICAL METHODS

Parameter (units)	Sample type	Analytical Methods—References									
		1974 EPA Methods[1]*		14th ed., Standard Methods[2]		Pt. 31, 1975 ASTM[3]		USGS Methods[4]		Other Approved Methods	
		Page Number	Detection Limit	Page Number	Detection Limit	Page Number	Detection Limit	Page Number	Detection Limit	Page Number	Detection Limit
Biochemical Oxygen Demand (BOD_5) (mg/l)	24 hour composite	-	-	543	-	-	-	-	-	17[6]	-
Chemical Oxygen Demand (COD) (mg/l)	24 hour composite	20	5 mg/l	550	10 mg/l	472	-	124	-	610[7] 17[6]	5 mg/l -
pH (Standard Units)	Grab	239	-	460	-	178	-	129	-	606[7]	-
Total Suspended Solids (TSS) (mg/l)	24 hour composite	268	10 mg/l	94	-	-	-	-	-	-	-
Temperature (°C)	Grab	286	-	125	-	-	-	31[8]	-	-	-
Total Kjeldahl Nitrogen (as N) (TKN) (mg/l)	24 hour composite	165 175 182	0.03 mg/l 1 mg/l 0.05 mg/l	437	0.02 mg/l	-	-	122	-	612[7]	-
Total Organic Carbon (TOC) (mg/l)	24 hour composite	236	1 mg/l	532	1 mg/l	467	2 mg/l	4[9]	1 mg/l	-	-
Cyanide, Total (mg/l)	Grab	40 40	1 mg/l 0.02 mg/l	361 361	1 mg/l 0.02 mg/l	503 503	1 mg/l -	85	0.01 mg/l	22[6]	-
Phenols, Total (4AAP) (mg/l)	Grab	241	0.005 mg/l	582	0.007 mg/l	545	0.005 mg/l	-	-	-	-

*All footnotes are at the end of the table.

Parameter (units)	Sample type	Analytical Methods—References									
		1974 EPA Methods[1]		14th ed., Standard Methods[2]		Pt. 31, 1975 ASTM[3]		USGS Methods[4]		Other Approved Methods	
		Page Number	Detection Limit	Page Number	Detection Limit	Page Number	Detection Limit	Page Number	Detection Limit	Page Number	Detection Limit
Volatile toxic pollutants[13,14]	72 hour grab composite	-	-	-	-	-	-	-	-	-	-
Acid, base-neutral, pesticides organic toxic pollutants[13,14]	72 hour composite or 3 24-hour composites	-	-	-	-	-	-	-	-	-	-
Antimony, Total (mg/l)	24 hour composite	94	0.5 mg/l	-	-	-	-	-	-	-	-
Arsenic, Total (mg/l)	24 hour composite	9 95	0.01 mg/l 0.002 mg/l	283 159	0.03 mg/l 0.0025 mg/l	-	-	31[10] 37[10]	0.005mg/l 0.001mg/l	-	-
Beryllium, Total (mg/l)	24 hour composite	99	0.025 mg/l	152 177	0.03 mg/l 0.005 mg/l	-	-	53	0.01 mg/l	-	-
Cadmium, Total (mg/l)	24 hour composite	101	0.025 mg/l	148 182	0.025 mg/l 0.01 mg/l	345	0.05 mg/l	62	0.025 mg/l	619[7] 37[6]	0.1 mg/l -
Chromium, Total (mg/l)	24 hour composite	105	0.1 mg/l	148 192	0.1 mg/l -	345 286	0.2 mg/l -	78 77	-	619[7]	1 mg/l
Copper, Total (mg/l)	24 hour composite	108	0.1 mg/l	148 196	0.1 mg/l 0.03 mg/l	345 293	0.1 mg/l 0.05 mg/l	83	0.05 mg/l	619[7] 37[6]	0.1 mg/l -
Lead, Total (mg/l)	24 hour composite	112	0.5 mg/l	148 215	0.5 mg/l -	345	0.34 mg/l	105	0.001 mg/l	619[7]	1 mg/l
Mercury, Total (mg/l)	24 hour composite	118	0.0002 mg/l	156	-	338	0.0002 mg/l	51[10]	0.0001 mg/l	-	-
Nickel, Total (mg/l)	24 hour composite	141	0.15 mg/l	148	0.1 mg/l	345	0.08 mg/l	115	0.001 mg/l	-	-

Parameter (units)	Sample type	Analytical Methods--References									
		1974 EPA Methods[1]		14th ed., Standard Methods[2]		Pt. 31, 1975 ASTM[3]		USGS Methods[4]		Other Approved Methods	
		Page Number	Detection Limit	Page Number	Detection Limit	Page Number	Detection Limit	Page Number	Detection Limit	Page Number	Detection Limit
Selenium, Total (mg/l)	24 hour composite	145	0.002 mg/l	159	0.0025 mg/l	-	-	-	-	-	-
Silver, Total (mg/l)	24 hour composite	146	0.06 mg/l	148 243	0.06 mg/l -	-	-	142	0.001 mg/l	619[7] 37[6]	0.1 mg/l -
Thallium, Total (mg/l)	24 hour composite	149	0.05 mg/l	-	-	-	-	-	-	-	-
Zinc, Total (mg/l)	24 hour composite	155	0.02 mg/l	148 265	0.015 mg/l -	345	0.02 mg/l	159	0.01 mg/l	619[7] 37[6]	0.1 mg/l -
Ammonia (as N) (mg/l)	24 hour composite	158 159 165 168	0.05 mg/l 1 mg/l 0.03 mg/l 0.01 mg/l	410 412 416	- 0.02 mg/l 0.01 mg/l	237	-	116	-	614[7]	0.05 mg/l
Asbestos[14] (fibers/l)	24 hour composite	-	-	-	-	-	-	-	-	-	-
Bromide (mg/l)	24 hour composite	14	2 mg/l	-	-	323	50 mg/l	58	1 mg/l	-	-
Chlorine, Total Residual (mg/l)	Grab	35 55	- -	318 322 332 329	1 mg/l - - -	278	-	-	-	-	-
Color (platinum cobalt units)	24 hour composite	39 36	- 1 unit	66 64	- 1 unit	-	-	82	-	-	-

Parameter (units)	Sample type	Analytical Methods—References									
		1974 EPA Methods[1]		14th ed., Standard Methods[2]		Pt. 31, 1975 ASTM[3]		USGS Methods[4]		Other Approved Methods	
		Page Number	Detection Limit	Page Number	Detection Limit	Page Number	Detection Limit	Page Number	Detection Limit	Page Number	Detection Limit
Fecal Coliform (number per 100 ml)	Grab	-	-	922 937	2.2 per 100 ml -	-	-	45[5]	1 per 100 mg	-	-
Fluoride mg/l	24 hour composite	65 59 61	0.1 mg/l 0.1 mg/l 0.05 mg/l	389 391 393 614	- 0.2 mg/l 0.05 mg/l 0.1 mg/l	307 305	0.1 mg/l -	93	0.1 mg/l	-	-
Nitrate (as N) (mg/l)	24 hour composite	201 197 207	0.01 mg/l 0.1 mg/l 0.05 mg/l	427 620 423	0.1 mg/l 0.5 mg/l 0.002 mg/12	358	1 mg/l	119	-	614[7] 28[6]	0.1 mg/l 1 mg/l
Nitrite (as N) (mg/l)	24 hour composite	215	0.01 mg/l	434	0.001 mg/l	-	-	121	-	-	-
Oil and Grease (mg/l)	Grab or Grab composite	229	5 mg/l	515	-	-	-	-	-	-	-
Phosphorus, Total (as P) (mg/l)	24 hour composite	249 256	0.01 mg/l 0.001 mg/l	476 481 624	- 0.01 mg/l 0.001 mg/l	384	0.01 mg/l	130	-	621[7]	0.01 mg/l
Radioactivity Alpha-Total (pCi/l)	24 hour composite	-	-	648	-	591	500 pCi/l	75, 78 (10,11)	-	-	-
Alpha-Counting Error (pCi/l)	24 hour composite	-	-	648	-	594	-	79[10]	-	-	-
Beta-Total (pCi/l)	24 hour composite	-	-	648	-	601	500 pCi/l	75, 78 (10,11)	-	-	-
Beta-Counting Error (pCi/l)	24 hour composite	-	-	648	-	606	-	79[10]	-	-	-
(a) Radium-Total (pCi/l)	24 hour composite	-	-	661	-	661	1 pCi/l	-	-	-	-

Parameter (units)	Sample type	Analytical Methods—References									
		1974 EPA Methods[1]		14th ed., Standard Methods[2]		Pt. 31, 1975 ASTM[3]		USGS Methods[4]		Other Approved Methods	
		Page Number	Detection Limit	Page Number	Detection Limit	Page Number	Detection Limit	Page Number	Detection Limit	Page Number	Detection Limit
(b) ^{226}Ra (pCi/l)	24 hour composite	-	-	667	-	-	-	81[10]		-	-
Sulfate (as SO_4)(mg/l)	24 hour composite	277 279	- 10 mg/l	493 496	10 mg/l 1 mg/l	424 425	20 mg/l 10 mg/l	-	-	624[7] 623[7]	- -
Sulfide (as S) (mg/l)	24 hour composite	284	1 mg/l	505 503	1 mg/l 0.1 mg/l	-	-	154	0.5 mg/l	-	-
Sulfite (as SO_3) (mg/l)	24 hour composite	285	2 mg/l	508	2 mg/l	435	3 mg/l	-	-	-	-
Surfactants (mg/l)	24 hour composite	157	0.025 mg/l	600	0.025 mg/l	494	-	11[9]	0.025 mg/l	-	-
Aluminum, Total (mg/l)	24 hour composite	92	1 mg/l	152 171	0.9 mg/l 0.006 mg/l	-	-	19[10]	0.01mg/l	-	-
Barium, Total (mg/l)	24 hour composite	97	0.4 mg/l	152	0.3 mg/l	-	-	52	0.1 mg/l	-	-
Boron, Total (mg/l)	24 hour composite	13	0.1 mg/l	287	0.1 mg/l	-	-	-	-	-	-
Cobalt, Total (mg/l)	24 hour composite	107	0.2 mg/l	148	0.15 mg/l	345	0.25 mg/l	80	-	37[6]	-
Iron, Total (mg/l)	24 hour composite	110	0.12 mg/l	148 208	0.1 mg/l 0.02 mg/l	345 326	0.1 mg/l 0.05 mg/l	102	0.1 mg/l	619[7]	0.1 mg/l
Magnesium, Total (mg/l)	24 hour composite	114	0.007 mg/l	148	0.007 mg/l	345	0.05 mg/l	109	0.05 mg/l	619[7]	0.01 mg/l
Molybdenum, Total (mg/l)	24 hour composite	139	0.3 mg/l	-	-	350	0.001 mg/l	-	-	-	-

Parameter (units)	Sample type	Analytical Methods--References									
		1974 EPA Methods[1]		14th ed., Standard Methods[2]		Pt. 31, 1975 ASTM[3]		USGS Methods[4]		Other Approved Methods	
		Page Number	Detection Limit	Page Number	Detection Limit	Page Number	Detection Limit	Page Number	Detection Limit	Page Number	Detection Limit
Manganese, Total (mg/l)	24 hour composite	116	0.05 mg/l	148 225 227	0.05 mg/l 0.3 mg/l 0.05 mg/l	345	0.04 mg/l	111	0.05 mg/l	619[7]	0.1 mg/l
Tin, Total (mg/l)	24 hour composite	150	4 mg/l	-	-	-	-	65[10]	0.05mg/l	-	-
Titanium, Total (mg/l)	24 hour composite	151	2 mg/l	-	-	-	-	-	-	-	-
Pesticides[12] (ug/l)	24 or 72 hour composite	-	-	555	(13)	529	(13)	30[9]	(13)	-	-
2,3,7,8 Tetrachloro dibenzo-p-dioxin (TCDD)[14] (ug/l)	72 hour composite or 3 24-hour composites	-	-	-	-	-	-	-	-	-	-

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Footnotes

(1) *Methods for Chemical Analysis of Water and Waste*, 1974.

(2) *Standard Methods for the Examination of Water and Waste Water*, 14th Edition, 1976.

(3) *Annual Book of Standards, Part 31, Water*, 1975, by American Society for Testing and Materials.

(4) Unless otherwise noted, Brown, E., Skougstad, M. W., and Fishman, M. J. "Methods for Collection and Analysis of Water Samples for Dissolved Minerals and Gases," U.S. Geological Survey Techniques of Water-Resources Inventory, book 5, Ch. A 1 (1970).

(5) Slack, K. V., and others, "Methods for Collection and Analysis of Aquatic Biological and Microbiological Samples", U.S. Geological Survey Techniques of Water-Resources Inv., book 5, Ch A 4 (1973).

(6) American National Standards on Photographic Processing Effluents, April 2, 1975.

(7) "Official Methods of Analysis of the Association of Official Analytical Chemists" methods manual, 12th ed. (1975).

(8) Stevens, H. H., Ficke, J. F., and Smoot, G. F. "Water Temperature-Influential Factors, Field Measurement and Data Presentation", U.S. Geological Survey Techniques of Water Resources Inventory, book 1 (1975).

(9) Goerlitz, D., Brown, E. "Methods for Analysis of Organic Substances in Water", U.S. Geological Survey Techniques of Water-Resources Inv., book 5, Ch. A 3 (1972).

(10) Fishman, M. J., and Brown, Eugene "Selected Methods of the U.S. Geological Survey for Analysis of Wastewaters" (1976) open-file report 76–177.

(11) The method found on p. 75 measures the dissolved portion and the method on p. 78 measures suspended. Therefore, the two results must be added together to get "total".

(12) Methods available from the Environmental Monitoring and Support Laboratory, the U.S. Environmental Protection Agency, Cincinnati, Ohio 45268.

(13) See referenced methods for detection limits of individual pesticides and organic toxic pollutants. In most cases, the 10 μg/l limit in 40 CFR § 122.68(a)(2)(ii)(A) will apply.

(14) Methods for the analysis of the 114 organic toxic pollutants and asbestos are being developed by the Agency's Office of Research and Development. The methods for analysis of organic pollutants will include:

(1) Gas chromatography/mass spectrometry (GC/MS) screening protocol for qualitative analysis for all 114 organic toxics. (An earlier version of this protocol has been used in the screening phase of developing national effluent guidelines.)

(2) Gas chromatography (GC) and liquid chromatography (LC) methods for twelve classes of the organic pollutants, which are being developed by EMSL, Cincinnati and by Effluent Guidelines Division contractors.

(3) Quantitative GC/MS, consisting of quality assurance procedures for use with the GC/MS screening protocol which will make it a quantitative method.

By early Summer 1979 the Agency expects to propose for comment the GC/MS screening protocol and the GC and LC methods developed by EMSL, Cincinnati. Shortly thereafter, the Agency will propose methods for sampling and preservation, and for determining the detection limit of an analytical method, and will update the references used in the existing methods. The other methods described above, as well as a new method for total metals using Inductively Coupled Argon Plasma (ICAP), and a method for asbestos analysis, will be proposed for comment about six months later.

The analysis for organic toxic pollutants required by item V–B of Form 2c will be satisfied by using either the proposed GC/MS screening protocol followed by quantification of those organic toxic pollutants identified as present using the proposed GC or LC methods; or by using the proposed quantitative GC/MS method.

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ENVIRONMENTAL PROTECTION AGENCY

[40 CFR Parts 122, 123, 125]

[FRL-1233-7]

National Pollutant Discharge Elimination System; Revision of Existing Regulations

AGENCY: Environmental Protection Agency.

ACTION: Proposed rulemaking.

SUMMARY: The Environmental Protection Agency is today proposing regulations under the Clean Water Act (CWA) for the National Pollutant Discharge Elimination System (NPDES). In addition, a revised NPDES application form is being published today in draft form in a public notice elsewhere in this Federal Register. The proposed regulations and the revised application form are intended to improve control of toxic pollutant discharges under the NPDES program.

To achieve proper control of toxic pollutant discharges, it is necessary to insure first, that dischargers are aware of the nature of their discharges and second, that they take all necessary actions to control their discharges. Today's proposed regulations implement this approach as follows:

1. Proposed § 122.64(d) establishes minimum requirements for applications to EPA for NPDES permits. The requirements are also made applicable to approved NPDES States by proposed § 123.73(a). These include requirements for certain applicants to analyze their process wastewater discharges for all toxic pollutants listed under section 307(a) of the CWA. In particular, certain applicants will be required for the first time to determine the levels or organic toxic pollutants in certain of their waste streams by analyzing 72-hour composite samples.

2. Proposed § 122.68(a)(2) provides that any pollutant which is reported or required to be reported in the application may not be discharged in excess of five times the average level reported in the application (or five times the detection limit of the analytical method if the pollutant is not detected) whenever the pollutant is not otherwise limited in the permit. This requirement is a modified version of the August 21, 1978 (43 FR 37078) proposal that pollutant discharges be limited to reported levels. (This regulation was originally proposed as § 122.14(a), but has been renumbered as § 122.68(a) in order to conform with the new numbering system of EPA's consolidated permit program regulations, which appear elsewhere in today's Federal Register.) Proposed § 122.68(a)(3) provides a mechanism for demonstrating that a multiple other than five is appropriate for the purposes of proposed § 122.68(a)(2).

3. The proposed regulations also contain a provision designed to implement the recent amendments to section 311(a)(2) of the CWA (Pub. L. 95-576, November 2, 1978). These provide that discharges of hazardous substances listed under section 311 are exempted from the penalties and requirements of section 311 if they are properly covered by the NPDES program. EPA proposed regulations on February 16, 1979 (44 FR 10271) which set forth in detail the requirements for exemptions. Proposed § 122.64(d)(19) provides permit applicants the opportunity to submit the necessary information for obtaining exemptions from the liabilities and requirements of section 311.

4. The proposed regulations also contain several other provisions which help implement the application, permit-writing, monitoring and reporting aspects of toxic pollutant control.

DATES: Comments must be received on or before September 12, 1979.

Meetings open to the public to discuss and receive comments on these proposed regulations and on the consolidated application form are scheduled for four cities. These same meetings will also serve as a forum to receive comments on two other aspects of the consolidated permits program, namely, the consolidated permit regulations which are proposed elsewhere in today's Federal Register, and reproposed Part 146 of the underground injection control (UIC) regulations published on April 20, 1979 at 44 FR 23738. The proposed conforming NPDES regulations will be discussed on the second and third day of each meeting.

These meetings will be held at the following places and dates:

July 16, 17,* 18, 1979, Dallas Texas.
July 23, 24,* 25, 1979, Washington, D.C.
July 26,* 27, 28, 1979, Chicago, Illinois.
July 30, 31,* August 1, 1979, Seattle, Washington.

ADDRESSES: Interested persons may participate in this proposed rulemaking by submitting comments to Edward A. Kramer (A-1), Permits Division (EN-336), Office of Water Enforcement, Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460. Please indicate clearly which regulation is referred to in all comments.

A copy of all public comments will be available for inspection and copying at EPA Public Information Reference Unit, Room 2922 (EPA Library), 401 M Street, SW., Washington, D.C. 20460. EPA's Public Information regulation (40 CFR Part 2) provides that a reasonable fee may be charged for copying.

Four public hearings have been scheduled at the following locations:

July 16, 17,* 18, 1979, Northpark Inn, 9300 North Central Expressway, Dallas, Texas.
July 23, 24,* 25, 1979, HEW Auditorium, 330 Independence Avenue, SW., Washington, D.C.
July 26,* 27, 28, 1979, Water Tower Hyatt, 800 North Michigan Avenue, Chicago, Illinois.
July 30, 31,* August 1, 1979, EPA—Region X, 1200 6th Avenue, Seattle, Washington.

At each public meeting, registration will be held from 8:30-9:00 a.m. and comments will be received from 9:00 a.m. until concluded, but no later than 5:00 p.m. In addition, an evening session will be held on the dates noted with an asterisk above, from 7:30 p.m. until concluded. Anyone wishing to make an oral statement should notify the following in writing, specifying the city and the date on which they wish to speak:

Ms. Judith Shaffer, Permits Division (EN-336), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460.

A pamphlet describing the proposed regulations and their relationship to the new NPDES application form has been prepared, titled "A Guide to the Consolidated Permit Application and Conforming NPDES Regulations" (C-7). This pamphlet, and six other pamphlets describing the final NPDES regulations, the proposed consolidated permit regulations and other proposed regulations pertaining to the consolidated permit programs are available from the Environmental Protection Agency, Public Information Center (PM-215), 401 M Street, SW., Washington, D.C. 20460.

FOR FURTHER INFORMATION CONTACT: Edward A. Kramer (A-1), Office of Water Enforcement (EN-336), Environmental Protection Agency, Washington, D.C. 20460, (202) 755-0750.

SUPPLEMENTARY INFORMATION:

I. *Introduction*

II. *Background*

A. 1977 Amendments to the CWA: Revision of Permit Strategy.

B. 1978 Amendments to the CWA: Exemption of Hazardous Substance Discharges Covered by NPDES from the Requirements of Section 311 of the CWA.

III. *Permitting Strategy*

* Day and evening sessions.

* Day and evening sessions.

A. General Scheme: Interrelation of Guildelines, Standards and Case-by-Case Designation of Limits.
B. Outline of Permit-Writing Procedure.
1. General.
2. Proposed § 125.3(c)(4): Use of Toxicity Units as Technology-Based Limits.
C. The Use of Limits on Indicators to Control Toxic Pollutants.
D. Proposed § 125.3(g): Requirement that Indicators used to Control Toxics be Limited to BAT Levels.
IV. *Proposed § 122.64(d): Minimum Requirements for Applying for NPDES Permits*
A. General Considerations.
B. Detailed Discussion of the Proposed Reporting Requirements.
C. Organic Toxic Pollutants.
1. The Problem.
2. Development of Test Methods for Organic Toxic Pollutants.
3. Waste Stream Variability.
4. Cost Considerations.
a. Exemption of Certain Industries from the Requirement of Analyze for Toxic Pollutants.
b. Exemption of Non-Process Wastewater Discharges from Toxic Pollutant Analyses.
D. Pollutant Discharges Which are Not Present in the Sampled Waste Stream.
E. Identification of Substances Identified as Hazardous Under Section 311 of the CWA.
V. *Proposed § 122.68(a): Application—Based Limits*
VI. *Monitoring and Reporting*
A. Typical Monitoring Scheme.
B. Additional Monitoring When Indicator Limits are Violated.
VII. *Economic and Resource Impacts of Applications Reporting Requirements*
A. Unit Costs of Sampling and Analysis.
1. Sampling and Analysis of 115 Organic Toxics.
2. Sampling and Analysis of Pollutants Other Than the Organic Toxic Pollutants.
B. Unit Reporting Costs.
C. Total Incremental Costs of Complying with Proposed Application Requirements.
D. Economic Impacts Upon Selected Industries.
E. Impact of Reporting Requirements Upon Independent Laboratory Capability.
VIII. *Miscellaneous Total Cost Estimates for Reporting Which is Not Required by Proposed Requirements*
A. Optional Application Reporting of Hazardous Substance Discharges.
B. Compliance Monitoring Costs.

I. Introduction

On June 7, 1979 EPA promulgated regulations in 40 CFR Parts 122–125 for the National Pollutant Discharge Elimination System (NPDES) permit program established by the Clean Water Act (CWA). These regulations substantially revised the former NPDES regulations.

The revised NPDES regulations did not implement all of the provisions contained in the original proposal of August 21, 1978 (43 FR 37078). In particular, they did not implement proposed § 122.14(a) (renumbered here as § 122.68(a)), which proposed that the discharge of any pollutant which was required to be reported in an NPDES application would be limited to the reported level. Many commentors on that provision remarked that they could not properly analyze the impact of the proposal until the revised application form became available. EPA agreed with these comments and withdrew the proposed requirement from final promulgation. Section 122.14(a) was reserved for reproposal pending public notice of the application form, which is accomplished today.

Elsewhere in today's **Federal Register**, EPA is proposing a set of regulations to consolidate all of its permit programs. In addition to NPDES, the proposed consolidated permit program regulations cover the Hazardous Waste program under the Resources Conservation and Recovery Act and the Underground Injection Control program under the Safe Drinking Water Act. While the substance of the NPDES regulations is largely unaffected by their incorporation into the proposed consolidated permit program regulations, the various provisions of the NPDES regulations are reordered and renumbered. Today's proposal of conforming NPDES regulations follows the organization and numbering system of the proposed consolidated permit program regulations.

Today's proposal addresses the issues which were deferred by the reservation of § 122.14(a) in the final NPDES regulations (now § 122.68(a)) as follows:

1. Proposed § 122.64(d) establishes minimum application reporting requirements for existing industrial dischargers seeking NPDES permits from EPA, and proposed § 123.73(a) makes these requirements applicable to States which operate NPDES programs ("approved NPDES States"). These requirements are reflected in EPA's revised application form, a draft of which is published in a public notice elsewhere in today's **Federal Register**. Among other requirements, § 122.64(d) requires the identification and reporting of toxic pollutants [listed under section 307(a) of the CWA] in certain waste streams discharged by applicants in certain industries. As described below in the permitting strategy discussion (section III), this information will assist permit writers in setting permit limits.

Provision is also made in this section for applicants to report discharges of hazardous substances listed under section 311 of the CWA; however, such reporting is not mandatory. However, as discussed below, many applicants may want to report these pollutants to take advantage of recent amendments to section 311(a)(2) of the CWA which now allows exclusion of these discharges from all requirements of section 311 whenever they are adequately covered by the NPDES program.

2. Proposed § 122.68(a)(2) provides that the discharge of any pollutant which is reported or required to be reported in the application is limited to five times the reported average level (or five times the pollutant's detection limit if the pollutant is not detected or reported) whenever the pollutant is not otherwise limited in the permit. This proposal is a modification of the August 21, 1978 proposal (in § 122.14(a)) that pollutants be limited to reported levels. This modification, as discussed below in detail, is designed to account for normal waste stream variability which assuring that, in general, pollutant discharges will not rise above reported levels. Proposed § 122.68(a)(3) further provides that a applicant may apply for limits based upon a multiplier greater than five if the applicant demonstrates, through prescribed procedures, that the variability of a particular waste stream warrants a different factor.

Another significant provision included in today's proposal, proposed § 125.3(g), is designed to implement the Agency's strategy for controlling discharges of toxic pollutants. This provision is discussed in section III–D of this preamble.

Today's proposal does not complete the regulation of toxic pollutants under NPDES. New application forms and associated requirements for publicly owned treatment works (POTW's) and for new industrial sources are currently being developed and will be proposed in the near future. Many of the issues addressed in the development of the proposed application requirements for existing industrial dischargers will be relevant to these other dischargers. The Agency will strive for consistency of requirements wherever feasible.

II. Background

A. *1977 Amendments to CWA: Revision of Permit Strategy.*—The first round of five-year NPDES permits issued to industrial dischargers began in 1973–1974. The permit strategy focused on assuring permittees' compliance with the CWA's deadline of July 1, 1977 for achievement of best practicable control technology currently available (BPT) and of various water quality and other standards required by section 301(b)(1)(C) of the Clean Water Act. Effluent guidelines promulgated under section 304 of the CWA focused on BPT-level limitations of a set of pollutant parameters which had traditionally been of concern in the field of water pollution control.

In December 1977, Congress amended the Clean Water Act (Pub. L. 95–217) to require increased emphasis upon the control of toxic pollutants listed under section 307(a). The Clean Water Act of 1977 established an initial list of toxic pollutants which included 65 compounds and classes of compounds which reflected a list of pollutants contained in a consent decree in *Natural Resources Defense Council* v. *Train*, 8 ERC 2120 (D.D.C. 1976), amended on March 9, 1979. (The list of 65 compounds and classes of compounds potentially includes thousands of specific compounds, and the task of analyzing for all of these pollutants would be overwhelming for the Agency and for the regulated community. EPA has revised the list of the 129 specific toxic pollutants which are the most persistent, prevalent, and toxic.) By July 1, 1984 (with certain exceptions), discharges of toxic pollutants must be reduced to levels which reflect the best available technology economically achievable (BAT). In most cases, BAT will be a more stringent standard than BPT.

The 1977 amendments also established a category of "conventional pollutants" for which the "best pollution control technology" ("BCT") must be achieved. BCT determinations involve the use of a cost test (under section 304(b)(4)(B) of the CWA), which in some cases may result in less stringent requirements than BAT (but no less stringent than BPT). As required by the amendments, the Agency has listed pH, fecal coliform, total suspended solids (TSS) and biochemical oxygen demand (BOD) as conventional pollutants (43 FR 32857, July 28, 1978). At the same time, the Agency also proposed to list chemical oxygen demand (COD), phosphorus, and oil and grease as conventional pollutants. The final decision whether to list these as conventional pollutants will be announced in the Federal Register, in the near future.

All pollutants other than toxic pollutants and conventional pollutants are commonly referred to as "nonconventional pollutants". Nonconventional pollutants are subject to BAT by July 1, 1984 or within three years after limitations are established, whichever is later, but in no case later than July 1, 1987 (section 301(b)(2)(F) of the CWA). The Clean Water Act also provides that BAT limits for nonconventional pollutants may be modified (to no less stringent a limit than BPT) under section 301(c) or (g) if the discharger can make certain economic or environmental demonstrations. These modifications are not allowed by the CWA for toxic or conventional pollutants.

The 1977 Amendments' increased emphasis on the control of toxic pollutants requires a revision of Agency priorities for water pollution control efforts. This revision is being conducted in two complementary areas.

(1) The Agency is currently developing effluent guidelines which establish BAT levels for toxic pollutants in certain industrial subcategories. Guidelines are being developed first for a selected list of industrial categories, agreed on in the NRDC Consent Decree, which are believed to present the most serious threat of toxic pollutant discharges. The guidelines are scheduled to be promulgated in stages, with the last guidelines scheduled to be promulgated by May 1981.

(2) Where promulgated effluent guidelines do not address a particular class of discharges or a particular class or pollutants, section 402(a)(1) of the CWA authorizes the Agency to set permit limits on a case-by-case basis. In such cases, permit writers must use any available guidance and their own best judgment to apply the relevant factors listed in section 304(b) of the CWA to the case at hand. See 40 CFR 125.3. The new emphasis on toxic pollutants now requires the development of the ability to set such case-by-case permit limits on toxic metals plus 115 organic toxic pollutants when guidelines are not available. This presents a whole new range of technical issues, requiring revision of the permit writing strategy (including the application requirements).

Because the Agency has needed time to implement the 1977 amendments, it developed a "second-round" permit policy. The policy is set forth in detail in EPA's Policy and Guidance for Issuing the Second Round of NPDES Permits to Industrial Dischargers (July 1978), which may be obtained from the contact person above. The major feature of the policy is the issuance of short-term (less than five years) permits containing BPT limitations to sources in certain industries, with expiration dates scheduled for eighteen months after the original NRDC Consent Decree schedule for promulgation of effluent guidelines. The first of these short-term permits will expire in mid-1980, at which time the new application will be used and the new permitting strategy will be applied.

The Agency's increased emphasis on the control of toxic pollutants also requires the Agency to close a significant loophole in the NPDES program. Where a particular pollutant is not specifically limited in the permit, there is no regulatory mechanism in place to insure that its discharge will be limited. Consider the situation where an applicant receives a permit containing technology-based limitations on those pollutants reported at significant levels in an application form. If the applicant discloses a small amount of a pollutant in an application (and therefore a specific permit limit is not set for the pollutant), and the applicant is later found to be discharging large amounts of that pollutant, no specific permit limit would be violated. This situation has occurred in the past, and has resulted in large unregulated discharges of toxic pollutants. While the Agency continues to maintain its general policy that pollutants may not be discharged except as authorized by a permit, it has endeavored to specify this requirement for pollutants reported or required to be reported in the application by imposing "application-based limits" (proposed §122.68(a)(2)) on those pollutants.

B. *1978 Amendments to the CWA: Exemption of Hazardous Substance Discharges Covered by NPDES From the Requirements of Section 311 of the CWA*

On November 2, 1978, the President signed further amendments to the Clean Water Act (Pub. L. 95–576). Section 311(a)(2) was amended to provide that all discharges of hazardous substances which are adequately covered under the NPDES program are exempt from the requirements and penalties of section 311 of the CWA. (See discussion below in section IV–E. See also the proposed hazardous substance regulations at 44 FR 10271, February 16, 1979.) As a result of the amendment of section 311(a)(2), the Agency was required to revise its NPDES application requirements to allow applicants the opportunity to report discharges of hazardous substances. When pollutants are

exempted from section 311 requirements in this way, they become subject to NPDES requirements. Permit conditions for reported hazardous substances will be established in a similar manner as conditions for toxic pollutants (discussed immediately below).

III. Permitting Strategy

This section explains how the new permitting strategy for toxics will work. The nex section discusses the proposed application requirements and shows how they fit into this strategy.

A. *General Scheme: Interrelation of Guidelines, Standards and Case-by-Case Designations of Limits*

Under section 402(a)(1) of the CWA, each permit must contain conditions to assure that all discharges will meet all applicable requirements of the CWA. These requirements include the technology-based requirements such as BAT and BCT (sections 301(b)(2) and 307(a)) as well as requirements based upon water quality standards, pollutant load allocation and other standards (sections 301(b)(1)(C), 208(e) and 307(a) of the CWA). The permit must be consistent with the most stringent applicable requirements.

Each State is required to establish standards for certain pollutants in its various water quality basins. In addition, EPA has promulgated effluent standards and prohibitions in 40 CFR Part 129 for six of the section 307(a) toxic pollutants. Whenever a pollutant is covered by any such standard, the permit writer must set a permit limit consistent with the standard.

However, when BAT-level permits addressing section 307(a) toxic pollutants begin to be issued in mid-1980, many States will not yet have established numerical water quality standards for most of the toxic pollutants. Similarly, the Agency will not have promulgated effluent standards or prohibitions under section 307(a) for most of the toxic pollutants. Even when standards are available, the pemit writer must consider the Act's technology-based requirements as well. If a technology-based requirement is more stringent for a particular pollutant in a particular waste stream than the applicable water quality or toxicity standard, the technology-based requirement must be applied.

Because the 1977 amendments emphasize BAT control of section 307(a) toxic pollutants and because water quality standards have not yet been established for most of the toxics, the permitting strategy has focused upon insuring the installation of BAT technology to control the toxics. Of course, where water quality or other standards apply, they will be included in permits as well.

The Agency has developed a dual approach to setting technology-based limits as provided for in section 402(a)(1) of the CWA. The chief source of technology-based limits is the effluent limitations guidelines, which are promulgated under sections 301 and 304 of the CWA and made applicable to entire classes (generally industry subcategories) of dischargers. Where guidelines do not completely cover a particular waste stream or particular pollutants in the waste stream, the permit writer must use his or her best professional judgment to set appropriate limits. This case-by-case approach, authorized by section 402(a)(1), allows permit writers to assure that all significant pollutant parameters are limited, so that EPA may focus its guidelines development on the most severe toxic pollutant discharges.

Under the amended NRDC Consent Decree, the Agency is initially developing effluent guidelines, which focus upon toxic pollutants, for thirty-four industries. These are:

Adhesives and Sealants.
Aluminum Forming.
Auto and Other Laundries.
Battery Manufacturing.
Coal Mining.
Coil Coating.
Copper Forming.
Electric and Electronic Compounds.
Electroplating.
Explosives Manufacturing.
Foundries.
Gum and Wood Chemicals.
Inorganic Chemicals Manufacturing.
Iron and Steel Manufacturing.
Leather Tanning and Finishing.
Mechanical Products Manufacturing.
Nonferrous Metals Manufacturing.
Ore Minning.
Organic Chemicals Manufacturing.
Paint and Ink Formulation.
Pesticides.
Petroleum Refining.
Pharmaceutical Preparations.
Photographic Equipment and Supplies.
Plastics and Synthetic Materials Manufacturing.
Plastic Processing.
Porcelain Enamelling.
Printing and Publishing.
Pulp and Paperboard Mills.
Rubber Processing.
Soap and Detergent Manufacturing.
Steam Electric Power Plants.
Textile Mills.
Timber Products Processing.

New BAT guidelines for these industries will be developed and promulgated in stages. Several are scheduled for promulgation in 1979, and the last three will be promulgated by mid-1981. Thus, guidelines will be available in many cases to permit writers when short-term permits expire and permittees submit new applications.

However, as mentioned above, case-by-case determinations will be used to write permits for those discharges which are not covered by guidelines. These occur in several types of situations.

1. Where part or all of an applicant's operation is not in one of the 34 industrial categories listed in the NRDC Consent Decree, BAT guidelines for toxics will generally not have been promulgated. (In some cases, however, existing BAT guidelines may be adequate, such as where the only significant toxics in an industry are metals. In addition, effluent guidelines for some additional industries will be developed after the guidelines for the 34 industries covered by the Consent Decree are completed.)

2. Even within the 34 industrial categories, the NRDC Consent Decree gives EPA further authority to set priorities. Subparagraph 6(a) of the Decree allows EPA to exclude from guidelines development up to 5% of the sources within each subcategory. Further, subparagraph 8(a) allows EPA to exclude entire categories or subcategories where the amount and toxicity of each pollutant in the discharge does not justify developing national regulations in accordance with the Decree's schedule (even though some plants in the category or subcategory may pose a threat of toxic discharges). Similarly, a guideline for a particular subcategory may exclude particular pollutants if the frequency of their occurrence at toxic levels does not justify developing a national regulation for them (even though some individual plants may discharge significant quantities of these pollutants). Excluded industries will generally not be covered by adequate toxics BAT guidelines, although, as mentioned above, existing BAT guidelines may be sufficient in some instances.

3. The Decree was recently modified to extend the schedule for guidelines development. Thus, it is likely that certain short-term permits will expire prior to promulgation of applicable guidelines.

B. *Outline of Permit-Writing Procedure*

1. *General.* Upon receipt of a permit application, the permit writer will generally develop permit limits in the following manner:

a. The permit writer will first review the permit application. The reported SIC code and other relevant process or product related information (as

explained in section IV of this preamble) will be reviewed to determine the applicant's subcategory and to decide whether a guideline applies to the subcategory. The permit writer will next determine whether any of the plant's processes generating a discharge are not covered by the guideline. If the plant or a particular process does not appear to be covered by a guideline, it may be necessary to request further information from the applicant before setting limits.

b. Upon obtaining all necessary information, including file data and other sources of data on discharges for the facility, the permit writer will determine whether any pollutant not regulated by an applicable guideline is being discharged in a significant amount, requiring the development of specific permit limits (rather than relying upon the proposed § 122.66(a)(2) application-based limits provision) for the pollutant. The permit writer will thus have developed an informal list of pollutants for which additional control is required. These will include the section 307(a) toxic pollutants which have been reported in the application to be present at significant levels.

c. Permit limits must then be set to insure adequate reduction of these pollutants. Permit writers will use all available information to insure that permits reflect the appropriate technological standards. This information includes treatability studies currently being developed by EPA. These studies will demonstrate what levels are achievable for each toxic pollutant by use of certain types of treatment equipment (singly or in combination) for certain types of waste streams.

2. *Proposed 125.3(c)(4): Use of toxicity units as technology-based limits.* One drawback of the testing requirements for an NPDES application proposed in § 122.64(d)(16) is that the pollutants which are required to be tested constitute only a small portion of the total universe of pollutants. As a result, the effluent data reported in an application may show that no section 307(a) toxic pollutants are present, even though other pollutants are being discharged in toxic quantities.

Additional chemical testing beyond the pollutants listed in proposed § 122.64(d)(16) is not required because analytical methods for these additional pollutants have not yet been developed by the Agency. However, biomonitoring tests are a useful tool to determine whether a waste stream is significantly toxic, regardless of the pollutant(s) causing the toxicity.

While biomonitoring tests are not required as part of an NPDES application, permit writers have authority to require them under section 308 of the CWA or equivalent State authority. EPA believes it is appropriate to exercise this authority when there is a significant likelihood that a waste stream is toxic, based upon past biomonitoring tests, fish kills near the applicant's plant or similar plants elsewhere, the general character of the discharge as determined by chemical analysis, or other relevant factors. Permit writers are encouraged to use biomonitoring as a tool to supplement chemical analyses as part of the process of applying for an NPDES permit.

If a biomonitoring test is conducted and a significant level of toxicity is detected in a waste stream, the permit writer has several options. He or she can require the applicant to further analyze its waste stream to determine the cause of the toxicity and, if certain pollutants are thereby discovered which are believed to cause the toxicity, the permit writer may limit those pollutants directly. If treatability information is lacking for those pollutants, the permit writer may require the applicant to perform treatability studies under section 308 of the CWA or equivalent State authority.

If the permit writer is unable to trace the toxicity problem to specific pollutants, he or she may still require the applicant to conduct treatability studies, such as pilot plant studies, on the effectiveness of known treatment technologies in reducing the toxicity of the applicant's effluent. If a particular technology or series of technologies effectively reduces the toxicity, the permit writer may set limits reflecting that reduction. These may be toxicity-based limits such as LC_{50} numbers, provided that the toxicity-based limits reflect BAT.

(Note that toxicity-based limits, like other broad parameters such as BOD and COD, may be regulated in permits pursuant to sections 402 and 502(11) of the CWA, and may be necessary in some cases to achieve water quality standards.)

EPA intends to publish in the near future a biomonitoring protocol which explains more fully how biomonitoring may be used as part of the NPDES permitting strategy. This protocol will be a revised version of the May 1, 1978 draft which has been previously circulated to the public, and which may still be obtained from the contact person identified above.

C. *The Use of Limits on Indicators to Control Toxic Pollutants*

As in the past, permit writers may set limits on each pollutant which is discharged at significant levels. However, a new permitting strategy is required to reduce discharges of many of the organic toxic pollutants to BAT levels. The problem of setting specific permit limits upon specific organic pollutants is twofold:

1. Permit writers and industrial dischargers have not focused upon organic pollutants to any great extent in the past. The Agency has begun to develop treatability studies for all the organic toxic pollutants. These treatability studies will demonstrate which control equipment is effective in removing organic toxic pollutants. The Agency anticipates that the permit writer and the discharger will usually agree based upon these studies and other available information, that a certain piece or combination of treatment equipment will achieve BAT control for the toxic pollutants in the discharge. However, the lack of a historical data base will often preclude agreements upon precise numbers representing the levels of the toxic pollutants in effluents leaving the treatment equipment. This may result in protracted disputes over numerical limitations despite a general agreement upon appropriate technologies, and could cause serious delay in implementing the CWA's requirements.

2. Sampling and analysis for organic pollutants is much more expensive than it has been for pollutants traditionally regulated by the NPDES program. If organic pollutants are limited in the permit, the cost of periodic compliance monitoring can be very high and possibly unaffordable in some cases (see the detailed discussions of analytical methods and associated costs below in sections V–C and VII–A).

The Agency encourages the direct limitation of specific toxic pollutants wherever feasible, such as where only a few toxics are present in the waste stream and where sufficient data exists to allow agreement between the permit writer and applicant on achievable levels. In addition, direct limitation of a toxic pollutant will be necessary where the discharge of the pollutant is significant.

However, as described above, the Agency believes that it may not always be feasible to directly limit each toxic which is present in a waste stream. As a result, the Agency has developed an alternative approach to directly limiting toxic pollutants. This alternative approach centers upon setting limitations on certain more commonly regulated parameters whch can be

relatively easily agreed upon and which will not result in greatly increased compliance monitoring costs. This approach has been applied to a certain degree in the past (e.g., certain BPT guidelines which limit certain metals insure the installation of technology which also removes other metals). In developing new toxics-oriented BAT guidelines, this approach will be used even more than in the past. Similarly, permit writers may use this approach in setting case-by-case permit limits under section 402(a)(1).

The Agency uses the term "indicator" to denote a parameter which is limited in a permit based on treatment for removal of toxic pollutants, in lieu of specific limits on each toxic pollutant. Thus, once the appropriate BAT technology for reducing toxic pollutants has been identified, limits on properly selected indicators can be used to require permittees to attain the same degree of control over toxic pollutants as specific limits on toxic pollutants would require.

Indicators will generally be parameters or specific pollutants which are generally familiar. Some of the pollutant parameters which may be used as indicators are: Total suspended solids (TSS), biochemical oxygen demand (BOD), chemical oxygen demand (COD), total organic carbon (TOC), total Kjeldahl nitrogen (TKN), total phosphorus, cyanide, certain metals and ammonia. Most of these have been frequently limited in permits in the past. Further, most of them may be analyzed by methods which cost substantially less than the methods used to measure many specific pollutants (especially organic toxic pollutants).

However, the Agency recognizes that the use of indicators is not appropriate in all cases. In some situations, EPA may not be able to identify an indicator. For example, current information indicates that chloroform is best treated by steam or air stripping. If a waste stream contains no pollutants in significant quantitites except for chloroform and several metals, it may not be possible to require chloroform control by the use of any indicator. In that case, it will be necessary to specify a limitation for chloroform.

Another situation where specific limitations on toxics are required is where any combination of indicator limits could also be met by installation of an alternate treatment technology which would not sufficiently treat the toxic pollutants. If appropriate limits on indicator pollutants would allow the installation of controls which will not remove toxic pollutants, then the toxic pollutant must be controlled directly, or other indicator pollutants must be selected.

One potential problem associated with the indicator approach is that a plant may change its process in a manner which reduces or eliminates the indicator without affecting the indicated toxics. This would allow toxics discharges to take place without being detected by monitoring the indicator.

Another deficiency of indicators is their relative lack of sensitivity to short-term fluctuations of specific toxic pollutants. This means that if many organic constituents of a waste stream are discharged at unusually low levels, a particular organic toxic pollutant could be discharged at an unusually high level without causing a violation of an indicator limit. However, the Agency believes that the risk of an unacceptably high discharge of a particular toxic pollutant is not great so long as proper treatment equipment is installed and is operated and maintained properly. In addition, application-based limits under proposed § 122.68(a)(2) remain as a basis of liability for significantly increased discharges of any individual pollutant. This provision may be supported by permit requirements of occasional monitoring for all or some organic toxics or of additional monitoring when indicator limits are violated. Furthermore, permits may require biomonitoring tests to provide additional safeguards against toxicity (see discussion below on monitoring in section VI).

As noted above, however, the use of indicators is not a required part of EPA's strategy for regulating toxic pollutants, but rather an additional mechanism to allow more rapid agreement on BAT controls and appropriate permit limits. This mechanism has the added benefit of minimizing compliance monitoring costs. Permit writers may still apply direct limits on toxic pollutants as the circumstances warrent, and are encouraged to do so whenever technically and economically feasible.

D. *Proposed § 125.3(g): Requirement That Indicators Used to Control Toxics Be Limited to BAT Levels*

The indicator strategy relies on the principle that limits on indicator parameters will insure the installation and operation of BAT-level equipment to achieve BAT-level reduction of other pollutants, especially of organic toxic pollutants. For the strategy to work, BAT limits must be set for indicators which are used to indirectly control toxic pollutants. This principle has also been expressed in prior Agency documents, including the Federal Register notice listing conventional pollutants (43 FR 32858 (July 28, 1978) and EPA's *Policy and Guidance for Issuing the Second Round of NPDES Permits to Industrial Dischargers (July, 1978)). Proposed § 125.3(g) establishes this principle in regulatory form.*

Therefore, proposed § 125.3(g) provides that conventional pollutants (such as BOD and TSS) which are used as indicators for toxics are subject to BAT and are not subject to BCT cost tests. Similarly, nonconventional pollutants (such as COD and TOC) which are used as indicators for toxics are also subject to BAT and are not eligible for modifications under sections 301(c) and 301(g) of the CWA.

A potential problem with the concept of indicators is that if it is abused, it could subvert Congressional intent to set BCT limits for conventional pollutants and to allow variances for nonconventional pollutants. To minimize any such abuse, the regulations set a number of tests linking indicators to toxics which must be satisfied before a conventional or nonconvention pollutant can be regulated as an indicator pollutant.

To use conventionals or nonconventionals as indicators to control toxics to BAT levels, permit writers must identify (in the permit and in the accompanying statement of basis or fact sheet required by §§ 124.8 and 124.9) which toxics are intended to be controlled by each indicator, unless the indicator is established by an applicable effluent guideline. In addition, permit writers must be able to justify indicator limits by demonstrating that the indicator limits will result in installation of treatment equipment which constitutes BAT for toxic pollutant discharges. This will insure that conventional and nonconventional pollutants are not limit to levels which are more stringent than is required to achieve BAT-level reduction of toxic pollutants. It should be noted that in many instances, conventional and nonconventional pollutants will be limited to BAT levels because of other requirements of the CWA, even if they are not use as indicators. This will occur where BCT for a conventional is the same as BAT or where a source fails to meet the section 301(c) or (g) criteria for modifications from BAT for a nonconventional pollutant.

Nonmodifiable BAT limits for conventionals and nonconventionals where they are used as toxic indicators will not result in the imposition of stricter controls than are authorized by the CWA. For example, where an

indicator is a conventional pollutant, the treatment installed to meet the indicators's BAT limit is the same treatment as would be installed to meet the BCT limit for the conventional plus the BAT limits for specific toxics covered by the indicator. While the conventional pollutant may be reduced to levels more stringent than required by BCT, this would occur in any event as the result of the required installation of BAT technology to control the toxics, if they were being regulated directly. The method used to require the installation of BAT technology (direct limitation of toxics or the use of indicators) will not affect ultimate level of pollution control.

Comments on all aspects of the indicator approach and suggestions on other alternatives are welcome.

IV. Proposed § 122.64(d): Minimum Requirements for Applying for NPDES Permits

A. General Considerations

Generally, the Agency believes that dischargers have a duty to be aware of any significant pollutant levels in their discharges. Under existing application requirements, applicants must examine their waste streams and processes in a manner that reflects existing considerations in water pollution control. Proposed §§ 122.64(d) and 123.73(a) (which makes § 122.64(d) applicable to States) increase the requirements to reflect the new emphasis on toxic pollutant discharges.

Specifically, the proposed application reporting requirements will serve two major functions:

1. Like the requirements of the existing application, they will generate the information which permit writers need to set permit limits which accurately reflect the achievable pollutant reductions for each discharger.

2. They will establish the basis for application-based limits under proposed § 122.68(a)(2): Any pollutant which is reported or required to be reported in the application and is not otherwise limited in the permit is limited to five times the reported level (or five times the pollutant's detection limit, if the pollutant was not detected).

As previously noted, EPA's NPDES application form (a draft of which is published in a public notice elsewhere in today's **Federal Register** will implement the new requirements where EPA operates the NPDES program. While States must also apply these requirements in developing their application forms, they need not use EPA's application format or language. Of course, they may and are encouraged to conform to EPA's approach.

It is important to note that any effluent data which is contained in a permit application must be made available to the public. This is explicitly required by section 402(j) of the CWA and is not subject to change be EPA. However, EPA has taken two steps to make certain that this requirement is administered reasonably. First, product information (e.g. the amount of product produced per year) must be reported only where the information is needed to apply a production-based effluent guideline limitation (as opposed to, e.g., the use of concentration-based guideling or the case-by-case development of individualized permit limits). Second, only end-of-pipe effluent data must be reported. If the permit writer needs additional information (e.g., process discharges upstream of a treatment system), he or she will generally request it under section 308 of the CWA (or equivalent State authority), which provides that proprietary information may be claimed as confidential in appropriate circumstances (which are set forth in 40 CFR Part 2).

Applicants will be required to report their pollutant discharges in several ways. (In addition, intake water data must be reported by those applicants who seek credit for pollutants in their intakes under 40 CFR 122.70(g).)

First, all applicants will submit effluent data for pollutants which have traditionally been of concern in the field of water pollution control: the conventional pollutants, certain nonconventional pollutants (including those which can function as indicators for toxic pollutants) and certain toxic pollutants (including cyanide, total phenols and certain metals). While some of this information may be based upon estimates, most of it must be based upon sampling and analyzing the discharge.

Second, certain applicants must analyze and submit effluent data for certain waste streams for the toxic pollutants. Estimates of toxic pollutant discharges must be submitted for all waste streams which are not analyzed.

Third, applicants will be required to identify pollutant discharges which may occur during the term of the permit at more than five times the average levels found in the analyzed waste stream. This may be based on knowledge or expectation that certain processes or raw materials will be used at some point during the life of the permit (e.g., batch processes, changed processes, raw materials substitutions and periodic discharges). This requirement appears only as a provision in EPA's application form which is public noticed elsewhere in today's **Federal Register** and is not established as a minimum application requirement in proposed § 122.64(d), since a similar requirement appears in proposed § 122.68(a)(3) (discussed in section V of this preamble).

Fourth, in accordance with recent amendments to section 311 of the CWA, each applicant will be given the opportunity, at its option, to anticipate discharges (including occasional spills) of hazardous substances (designated by the Administrator under section 311 of the CWA) which are not otherwise identified in the application.

The information discussed in the preceding paragraphs will help insure that (1) permit limits adequately address all pollutants which may be discharged by applicants (whether or not the pollutants are detected in the waste streams which the applicant has analyzed) and (2) applicants are exempted from section 311 requirements as provided by section 311(a)(2) of the CWA and proposed 40 CFR 117.12.

Applicants are also required to identify any other relevant information which they possess, such as biomonitoring data and analyses of discharge levels of pollutants not otherwise required to be reported in the application. The permit writer may then request any of the identified data which he or she believes will help to choose appropriate permit limits.

The Agency recognizes that the proposed list of pollutants for which effluent data must be provided is not exhaustive. For example, there are many section 311 hazardous pollutants (or ions of such pollutants) which are not listed as toxic pollutants under section 307(a). Similarly, three contaminants for which primary drinking water standards have been promulgated in 40 CFR Part 141 are not on the toxics list.

The omission of specific reporting requirements for these and most other nonconventionals has been required by constraints upon Agency resources. Consistent with the NRDC Consent Decree and the 1977 amendments, the Agency has concentrated its limited resources upon the worst problem, that is, the section 307(a) toxic pollutants. Thus, effluent guidelines as well as Agency development of both test methods and treatability studies are presently focusing upon the toxics. However, *the proposed list of pollutants to be reported should not be viewed as static.* The Agency intends to develop test methods and treatability studies on pollutants of concern which are not now on the toxics list. This development process has already begun, with initial

emphasis being placed upon section 311 hazardous substances. Reporting requirements will be expanded as additional test methods are developed and treatability studies are completed.

The general requirement that applicants identify information which they have in their possession but are not required to submit, plus the invitation that applicants submit information on hazardous substances, may lead to identification and control of significant discharges which are not specifically required to be reported. Furthermore, permit writers may require applicants to submit additional information where necessary. This may include additional testing, such as biomonitoring tests to assess the relative toxicity of a waste stream. See § 122.64(d)(20).

The Agency strongly recommends that permit writers require applicants to perform biomonitoring tests as part of the application process in appropriate situations. Such tests could include acute and chronic aquatic toxicity tests and tests for bioaccumulation. The Agency is also evaluating the use of specific screening tests for carcinogenicity, mutagenicity and teratogenicity. Factors relevant to requiring biomonitoring include past history of fish kills, previous biomonitoring results indicating toxicity, the nature of the applicant's process, and the applicant's industrial category. This information is useful for setting permit limits where reported effluent data for the toxics is insufficient (see discussion in section III–B(2) above) and for establishing priorities for permit issuance.

Finally, it should be noted that even without direct permit controls on many pollutants, their levels will often be reduced incidentally by the treatment equipment installed to reduce toxic pollutants to BAT levels.

B. *Detailed Discussion of the Proposed Reporting Requirements*

The new emphasis on toxic pollutants has caused the proposed addition of a number of organic compounds to the list of pollutants required to be reported by the expiring form. (For the sake of simplicity in this discussion, compounds such as cyanide and the perchlorinated hydrocarbons will be grouped with the organics.) In addition, certain changes are proposed in the reporting requirements for asbestos, metals (13 of which are now classified as toxic pollutants) and various other pollutants. These changes include both additions to and deletions from the list as well as changes in the nature of reporting requirements for certain pollutants retained on the list.

Additions and deletions were made for various reasons. Some parameters were deleted (e.g., specific conductance and settleable matter) because they are not sufficiently sensitive or because they overlapped other more useful parameters. Others such as chloride, calcium, potassium, and sodium, were deleted because they are relatively nontoxic and the levels and amounts found in industrial discharges are generally not of concern. Algicides and chlorinated organic compounds were deleted since the test methods for these general parameters specify analyses for specific toxic pollutants listed under section 307(a), which are now required to be reported individually.

Additions include the organic toxic pollutants, as well as total Kjeldahl nitrogen (TKN) and total organic carbon (TOC), which are expected to be particularly useful as indicator pollutants.

The requirements of the existing application form include quantitative reporting for certain pollutants, qualitative (presence or absence) for others, and qualitative followed by quantitative reporting (if the pollutant is present) for still others. In the existing form, qualitative reporting may always be based upon estimates.

The new requirements follow this pattern to some extent. However, most pollutants must now be reported quantitatively. Other pollutants which are not found in most waste streams or which are less significant may be reported qualitatively, and, if present, quantitatively.

Analyses are required for pollutants which are expected to be useful as indicator pollutants and (with two exceptions noted below) for toxic pollutants which are likely to be found in a waste stream. For other pollutants, which are either not of overriding importance environmentally or which do not frequently appear in significant concentrations, estimates are permitted. However, applicants are expected to use analyses whenever they are unable to make reliable estimates.

Two pollutants on the toxics list may be reported in all cases on the basis of estimates. These are asbestos and 2,3,7,8-Tetrachlorodibenzo-p-dioxin(TCDD). Asbestos is excluded from testing requirements because its analytical method is both very expensive and highly controversial. TCDD is excluded because it is so highly toxic that it would be against the public interest to promote the routine shipping of analytical standards of TCDD, which are necessary for quantitative analysis. Instead, EPA is investigating other approaches to determine where this particular pollutant can be expected to be found.

The pollutant reporting requirements are summarized in the following three tables:

Table I—Pollutants Reportable Under Existing Requirements but Deleted in Proposed Requirements.

Algicides.
Calcium
Chlorides.
Chlorinated Organic Compounds.
Organic Nitrogen.
Potassium.
Settleable Matter.
Sodium.
Specific Conductance.

Table II—Pollutants not Reportable Under Existing Requirements But Added in Proposed Requirements

Pollutant	Proposed reporting requirement
Asbestos	Qualitative/Quantitative.*
Dioxin	Qualitative/Quantitative.*
Toxic organics (except asbestos, cyanide and dioxin)	Quantitative for Group I** for process wastewater discharges. Qualitative/Quantitative for Group II and non-process waste-water discharges from Group I.
TKN	Quantitative.
TOC	Quantitative.

*Qual/Rative/Quantitative means a qualitative determination of whether the pollutant is present based on estimates or analyses, followed by quantification only if the pollutant is present.

**Group I industries are the 34 industries covered by the NRDC consent agreement (listed in section III—A of this preamble), plus asbestos manufacturing and ferroalloys. All other applicants are in Group II. The basis for the groupings is discussed below in the discussion of organic toxic pollutants.

Pollutants Retained From Existing Form

Pollutant	Existing requirement	Proposed requirement
Aluminum, Total	•	•
Ammonia	•	•
Antimony	Qualitative	••
Arsenic	•	••
Barium, Total	Qualitative	•
Beryllium, Total	•	••
BOD	Quantitative	Quantitative.
Boron, Total	Qualitative	•
Bromide	Qualitative	•
Cadmium, Total	•	••
Chromium, Total	•	••
Cobalt, Total	Qualitative	•
COD	Quantitative	Quantitative.
Color	Qualitative	•
Copper, Total	•	••
Cyanide, Total	•	Quantitative.
Fecal Coliform	Qualitative	•
Fluoride	Qualitative	•
Iron, Total	Qualitative	•
Lead, Total	•	••
Magnesium, Total	Qualitative	•
Manganese, Total	Qualitative	•
Mercury, Total	•	••
Molybdenum, Total	Qualitative	•
Nickel, Total	•	••
Nitrate	Qualitative	•
Nitrite	Qualitative	•
Oil and grease	•	Quantitative.
Pesticides	Qualitative	•
pH	Quantitative	Quantitative.
Phenols, Total	Qualitative	•

Pollutants Retained From Existing Form—Continued

Pollutant	Existing requirement	Proposed requirement
Radioactivity	Qualitative	•
Residual Chlorine	•	•
Selenium, Total	•	••
Silver, Total	Qualitative	••
Sulfate	Qualitative	•
Sulfide	Qualitative	•
Surfactants	Qualitative	•
Temperature	Quantitative	Quantitative.
Thallium, Total	Qualitative	••
Total Phenols	•	Quantitative.
Tin	Qualitative	•
Titanium	Qualitative	•
TSS	Qualitative	Qualitative.
Zinc	•	••

*Qualitative/Quantitative. This means a qualitative determination of whether the pollutant is present based on estimates or analyses, followed by quantification only if the pollutant is present.

**Group I process wastewater discharges: Quantitative. All other discharges: Qualitative/Quantitative.

C. *Organic Toxic Pollutants.*

1. *The Problem.* Organic toxic pollutants have not traditionally been of concern in the field of water pollution control. However, under the 1977 amendments, they have become the focus of the agency's water pollution control efforts (they comprise 115 of the 129 toxics listed under section 307(a)). Their control requires consideration for the first time of various technical and economic issues. The issues and their proposed resolutions are discussed below.

There are several features associated with the analytical methods for organic chemicals that make these chemicals more difficult and expensive to analyze than other pollutants. Many of the comments on the August 21, 1978 proposal of the NPDES regulations emphasized these aspects, which are summarized below.

(a) Methods of sampling and analyzing for most organics are in their relative infancy compared to those used for other pollutants. (However, 40 CFR Part 136 test methods have already been promulgated for several organics on the toxic pollutants list under section 304(h) of the CWA. These are cyandide, total phenols, pentachlorophenol, some pesticides and several chlorinated organics). The American Society of Testing Materials does not yet have standardized methods for many such pollutants, and achievability of a high degree of precision and accuracy for such analyses is not universally acknowledged. The Agency has not yet promulgated test methods for most of the organic toxics although it intends to propose such methods for incorporation into 40 CFR Part 136 by early Summer 1979. However, EPA has had a draft screening protocol since 1977, which has been used extensively in developing information for effluent guidelines. Copies of the draft protocol may be obtained by contacting the Analytical Methods Coordinator, Effluent Guidelines Division (WH–552), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460.

(b) In many industries, the level of any particular toxic pollutant in a waste stream may fluctuate widely even within short periods of time. This is caused by a number of factors, including varying feedstocks, variations in the process, variations in the efficiencies of the treatment systems, chemical reactions of pollutants in the waste stream, the periodic use of different cleaning fluids (often of a composition known only to the manufacturer), and other causes which prevent a steady state. These factors make it difficult to report pollutant discharge levels which are representative of the waste stream.

(c) The costs of sampling and analyzing for the 115 organic toxic pollutants are high when compared to costs for measuring the more traditional pollutants. A typical cost for sampling and analyzing an outfall may be expected to be in the vicintiy of $4,500 as explained more fully in the discussion of costs in section VII below. The total cost of sampling and analysis for plants with many outfalls will be much higher. Further, if frequent waste characterizations are required subsequent to permit issuance, compliance monitoring costs could in some cases become unaffordable. While the indicator approach will greatly reduce monitoring costs, permit writers may require occasional monitoring of specific organic toxics or additional monitoring when indicator limits are violated (see discussion below in section VI).

In designing both the application requirements and the permitting strategy, the Agency focused its efforts on accounting for waste stream variability and on minimizing dischargers' costs without sacrificing the goals of the CWA.

2. *Development of Test Methods for Organic Toxic Pollutants.* The Agency intends to propose sampling and analytical methods for all of the organic toxic pollutants under section 304(h) of the CWA in the Summer of 1979 and to promulgate them by the time applicants begin to use the revised application form. (As noted previously, test methods have already been promulgated for several organic toxics.) Two alternative analytical methods will be provided. One method is quantitative GC/MS (gas chromatography/mass spectrometry). The alternate provides for identification or "screening" (presence/absence) of organic toxics by GC/MS followed by GC (or liquid chromatography—LC—in certain cases) quantification of those pollutants which have been identified.

Applicants will be given the choice of using either analytical method. Quantitative GC/MS is the less expensive method for waste streams containing many of the organic toxic pollutants. It also overcomes pollutant interferences that can in some instances make GC or LC analysis difficult to use reliably.

The Agency has not promulgated approved methods for sampling; however, some general guidance is provided in section E of the instructions to the consolidated application form (the instructions appear along with the consolidated application form as a public notice elsewhere in this Federal Register). Certain aspects of sampling methodology may be proposed for inclusion in 40 CFR Part 136 in the near future. However, it is not possible to specify sampling methods which cover every specific situation in detail. Good sampling techniques depend largely on the qualification and experience of the person conducting or providing on-site supervision of the applicant's sampling. The Agency therefore encourages, and has assumed in its costs analysis (section VII below), that each applicant will employ at least one experienced independent contractor to perform its sampling activities.

3. *Waste Stream Variability.* Waste stream variability consists of both short-term and long-term variations. The latter, which applies to metals and other inorganic pollutants as well as to organics, is addressed in the next section. This dissussion focuses on the short-term aspects of variability.

Short-term fluctuations in levels of a pollutant are generally smaller in BPT-treated waste streams than in untreated waste streams. Since the Clean Water Act required dischargers to install BPT treatment by July 1, 1977, most applicants have installed BPT equipment; thus the variability problems associated with raw waste streams have been somewhat mitigated. Some sources that have not installed BPT equipment as required by the CWA may argue that they may be forced to incur additional expenses in trying to accurately characterize their raw or inadequately treated waste streams. In such situations, any additional expense will be the result of their own failure to install BPT equipment.

Even where BPT has been installed, some short term variability may be expected. The Agency is addressing this

problem for organic toxics by requiring a single flow proportional composite sample taken over a 72-hour period (for certain pollutants, such as volatile organics, periodic grab samples of the discharge taken over the 72-hour period will be necessary). This procedure, which the Agency has used in collecting samples in its effluent guidelines development, helps minimize the effect of short-term fluctuations upon the measured value, and will contribute greatly to a more accurate representation of the discharger's waste stream.

Seventy-two hour composites will not provide a perfectly representative picture of the applicant's waste stream. However, experience in developing effluent guidelines shows that 72-hour composites are adequate to the purposes of the permitting strategy: setting permit limits for pollutants which are present at significant levels, and imposing application-based limits.

The decision to use a single 72-hour composite sample resulted from the Agency's judgment that the incremental benefits of requiring further sampling and obtaining a slightly better picture of the range of potential variability do not justify the imposition of the significantly greater costs which would result from either (1) extending the length of time for sampling, or (2) increasing the required number of samples (e.g., consecutive or nonconsecutive 24-hour composites). Similarily, the Agency believes that a 72-hour composite yields a significantly better picture of the waste stream than a single 24-hour composite, thereby justifying the resulting increase in sampling costs. Comments and data are invited on the Agency's choice of the single 72-hour composite sample for use in analyzing organic toxic pollutants, and on what techniques are necessary to preserve such samples.

The Agency recognizes that certain dischargers may wish to go beyond the requirement of a 72-hour composite sample. For example, they may analyze two or more composite samples, in which case they must report the arithmetic average as well as the maximum level of the analyses. The application-based liability provision of proposed § 122.68(a)(2) will apply to the arithmetic average of the reported levels.

4. *Cost Considerations.* Costs are minimized by exempting certain applicants (based on industry category) from analyzing for organic toxic pollutants and by exempting all applicants from conducting such analyses for non-process wastewater outfalls.

(a) *Exemption of Certain Industries from the Requirement to Analyze for Toxic Pollutants.* Industries are required to test for toxic pollutants on the assumption that such pollutants are likely to be present in their waste streams. The Agency's sampling of the 34 NRDC Consent Decree industries has generally revealed toxic pollutants in their discharges. In certain plants, the Agency did not discover significant levels of toxic pollutants. However, the Agency only sampled a few plants per subcategory in most cases, and the Agency does not feel that its sampling was sufficient to exclude all plants within any of the 34 categories or their subcategories from requirements to test for toxic pollutants as part of an application for a permit.

As a result, all plants within the 34 industries will be required to test for toxic pollutants, with exceptions of TCDD and asbestos for reasons explained in section IV–B. To avoid needless duplication, however, where EPA's Effluent Guidelines Division or its contractors analyzed the waste stream of a plant as part of EPA's project to develop new BAT guidelines for toxic pollutants, then the new application form provides that the plant may submit that data (where the data is acceptable) in lieu of testing again. Such data may be submitted only where conditions at the plant have not changed to the extent that the Effluent Guidelines Division's data no longer represent the discharge of the plant.

The Agency has not yet begun to develop BAT guidelines to regulate discharges of toxic pollutants in industries beyond the 34 included in the NRDC Consent Decree. Moreover, existing BPT and BAT guidelines development for these industries did not focus upon organic toxics. As a result, the Agency's sampling for such pollutants in preparation of those guidelines has been limited. However, the sampling data collected to date reveals that, in addition to the 34 NRDC industries, at least the following industries are likely to discharge organic toxic pollutants:

Ferrolloys. Effluent testing has revealed the presence of at least phenols and cyanide. See pages 59–118 of EPA's Development Document for this industry (EPA 440/1–73/008, August 1975). Effluents from blast furnaces may also contain polynuclear aromatic hydrocarbons.

Asbestos Manufacturing. Effluents may contain at least phenols, cyanide and asbestos. In addition, high levels of COD and TOC (Development Document 440/1–74/035, August 1974) may reflect the presence of other toxic pollutants. It should be noted, however, that since most sources in this category have already achieved zero discharge of process wastewater, the analytical requirements for this category will have minimal impact. See pages 47–55 of the Development Document (EPA 440/1–73/017, October 1973).

Applicants from these two industries must also sample and analyze for all the toxic pollutants in all discharges which contain process wastewater.

Applicants who are required to analyze for the toxic pollutants discharged from outfalls containing process wastewater (sources in the 34 NRDC industries, plus the asbestos and ferroalloys industries) are referred to as Group I applicants. All other applicants, referred to as Group II applicants, are generally exempt from analyzing for the organic toxic pollutants. However, they must analyze for any such pollutants which they know or have reason to believe may be present in their waste streams, and of course, permit writers have authority under section 308 of the CWA or similar State statutes to require such analyses on a case-by-case basis.

The list of Group I industries as set forth above is not final. As noted above, the Agency's information on organic toxics outside of the 34 industrial categories is presently limited. Further investigation may reveal that presently exempted industries or waste streams should not be exempted. (The industrial categories being considered for possible inclusion in Group I include Fertilizer, Concrete Products and Cement.) As information is developed, certain industries may be added to the Group I list, and applicants from those industries would then be required to analyze for the organic toxics when they apply for a new permit. It is also possible that some applicants who are now required to analyze for organics may be exempted in the future as more complete data becomes available.

When promulgated, § 122.64(d)(16) and the final revised application form may contain a different list of Group I and II industries from today's proposed list. Comments are solicited on inclusions and exclusions of all industries, no matter how they are classified in this proposal.

Several commenters upon the August 21, 1978 proposed NPDES regulations suggested that, in certain industries, only certain organic toxic pollutants should be required to be analyzed and reported. The Agency has considered

this approach but has not accepted it for two reasons.

First, Agency sampling of plants to date reveals considerable plant-to-plant variations of toxic pollutant in waste streams, even within industrial subcategories. In addition, this sampling has demonstrated that waste streams often contain pollutants which are not easily predicted by analyzing raw materials or production processes. As a result, it is not possible, based upon existing data, to predict with a high degree of confidence that any Group I discharger need not analyze for all the organic toxics.

Second, the commenters' suggested approach would probably not result in significant cost savings over the proposed requirements. The cost of collecting a sample would remain approximately the same no matter how many toxic pollutants were excluded. As for savings in analytical costs, if only a few pollutants need to be analyzed for, GC analysis without prior GC/MS screening might be used. However, even then, the savings realized by eliminating GC/MS screening would be partially offset by increased GC costs over those incurred when GC is preceded by GC/MS screening. Even if quantitative GC/MS is used, only a minor cost reduction could be achieved, and only in those cases where entire fractions (classes into which the organic toxics are divided for purposes of conducting GC/MS analysis) are excluded.

The Agency believes that the burden of determining the nature of pollutants discharged lies with the discharger, not with the Agency. While Agency experience analyzing waste steams as part of its BAT development project indicates that not all of the toxic pollutants will be found in every waste stream, this same experience leads the Agency to conclude that it is impossible at this time to determine which pollutants will be present in which waste stream, and most importantly, which pollutants will never be present. As a result, all indistries with a demonstrated potential for discharging toxic pollutants are required to analyze their waste streams containing process wastewater for all of the toxic pollutants.

However, the Agency is aware that in some waste streams in some industries, there may be a low likelihood that certain toxic pollutants will be present. The Agency invites comments and supporting data indicating which industries can omit analysis of which pollutants and demonstrating what the cost savings would be. In addition, the Agency solicits comments on the suggestion by one trade organization that it and other groups perform representative sampling for an industry to demonstrate that no toxics are present in particular classes of discharges within the industry. These comments should address how much investigation is necessary and what type of results would justify exclusion of the industry (or of a subcategory) from testing requirements for certain toxic pollutants. The Agency is particularly interested in this information as it pertains to relieving the testing burdens on small businesses.

It should be noted that although Group II applicants are not required by these regulations to analyze for the organic toxics, they may be required to do so by permit writers in particular situations under the authority of section 308 of the CWA, or equivalent state authority. For example, a Group II applicant may be required to conduct boimonitoring tests to determine the toxicity of its effluent. If the results reveal some evidence of toxicity, the applicant may then be required by the permit writer to analyze for the organic toxics. Such requirements are within the discretion of EPA and State permit writers, as set forth in proposed § 122.64(d)(20).

(b) *Exemption of Non-Process Wastewater Discharges from Toxic Pollutant Analyses.* All applicants are not required to sample and analyze non-process wastewater discharges for the toxic pollutants, provided that those discharges are not combined with process wastewater discharges. The exemption applies to discharges such as non-contact cooling water, surface runoff and sanitary wastes. The decision to exempt such discharges from testing requirements was based upon the facts that they are usually (although not always) nontoxic and that even when they contain toxic pollutants, those pollutants are often so diluted by large quantities of discharge water as to be analytically undetectable. However, these waste streams must be analyzed for parameters such as COD, BOD, and TOC, which will provide some information concerning discharges of organics. In addition, further information will be submitted as described in section IV–E below.

While these waste streams are not required to be tested for the toxic pollutants, all applicants are required to estimate any amounts which may be present. In addition, permit writers may require additional testing under section 309 of the CWA, or equivalent state authority.

D. *Pollutant Discharges Which Were Not Identified in the Sampled Waste Stream*

Applicants for EPA-issued permits will be required to supplement the required effluent data reporting by identifying pollutant discharges at levels which were not revealed by the required waste stream analysis and which may exceed five times the reported levels. The purpose of this requirement is to help the permit writer account for long-term waste stream variability.

Many waste stream fluctuations can be predicted to some degree. A coal-fired steam electric generating plant which obtains its coal from several different sources can often predict within a range that its effluent will at times contain pollutants (such as toxic metals) which are present in the various types of coal. Similarly, a plant which operates various batch processes can often predict the range and the types of pollutants that can be expected to be discharged as a result of those processes.

Not all waste stream variability is predictable. For example, changes in production methods several years after permit issuance may not have been predictable at the time of application. In such cases, § 122.11(c) of the consolidated permit program regulations provides that the permittee must notify the Director when it knows or has reason to believe that such changes have occurred or will occur. Where these changes result in a permit violation (including exceedance of the application-based limit), the permit may be modified under §§ 122.9(e) and 122.73.

Applicants are also required to identify any relevant analytical data or other information which they know to be available concerning pollutants which are not required to be reported by proposed § 122.64(d). The permit writer may request submission of any identified information which may be of assistance in writing the permit.

E. *Identification of Substances Identified as Hazardous Under Section 311 of the CWA*

Section 311 of the CWA contains strict penalties, reporting requirements and other provisions to prevent discharges (including spills) of oil and hazardous substances. In 40 CFR Part 116, the Agency has identified 299 substances as hazardous (some of these substances are on the section 307(a) toxics list as well). See 43 FR 10474 (March 13, 1978) and 44 FR 10268 (February 16, 1979).

Until recently, the section 311 provisions unnecessarily overlapped with section 402. It was possible that a discharge or spill of a hazardous substance through an outfall which was either in compliance with a permit or reviewed by the permit issuing authority but not controlled by the permit at all would constitute a discharge of "harmful quantities" of the substance under section 311, resulting in section 311 penalties.

To eliminate the overlap between sections 311 and 402, Congress amended section 311 in late 1978 to exempt discharges covered under the NPDES program. The amendments also deleted the standard of " harmful quantities" referred to above and introduced in its place the concepts of "reportable quantities" and "quantities which may be harmful."

Exemptions from the requirements and penalties of section 311 were provided for in three situations:

"(A) discharges in compliance with a permit under section 402 of this Act, (B) discharges resulting from circumstances identified and reviewed and made a part of the public record with respect to a permit issued or modified under section 402 of this Act, and subject to a condition in such permit, and (C) continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under section 402 of this Act, which are caused by events occurring within the scope of relevant operating or treatment systems." Section 311(a)(2) of the CWA, as amended in November 1978.

The Agency proposed regulations on February 16, 1979 which clarify the exemption, 40 CFR 117.12 (44 FR 10271). The proposal is explained in a detailed preamble to those regulations, which will not be repeated here. However, the exemption strategy may be summarized as follows:

1. Discharges of hazardous substances which may be predicted to result from normal operating procedures should be regulated through the NPDES system. This includes typical discharges such as process wastewater or non-contact cooling water. It may also include tank ruptures or other atypical events which may be controlled through the requirements of the NPDES program.

2. Spills of hazardous substances which either cannot be or have not been identified by the discharger in advance and controlled properly (either through new permit requirements or through already existing operating or treatment systems) remain subject to the requirements and penalties of section 311.

3. Dischargers should be given the opportunity to obtain section 311 exemptions by expressly seeking NPDES coverage. This is done by allowing applicants for NPDES permits to identify all discharges or potential discharges which may occur and to demonstrate the adequacy of treatment systems (or management practices such as spill diversion or containment) to control such discharges.

Proposed § 122.64(d)(19) and EPA's draft revised application form provide the applicant the option of identifying present and anticipated discharges of hazardous substances. The instructions which accompany the application form describe in detail the nature of the information to be submitted.

V. Proposed § 122.68(a): Application-Based Limits

Proposed § 122.68(a) is a reproposal of § 122.14(a) (proposed on August 21, 1978, 43 FR 37078). Proposed § 122.68(a) states that permittees are bound by two sets of limits: (1) For pollutants specifically limited in a permit, the technology-based, water quality-based or other limit set forth in the permit; and (2) for all pollutants which are reported or required to be reported in the application but which are not specifically limited in a permit, a limit which is a multiple of the reported average level (or a multiple of the detection limit of the method if the pollutant is not detected). Proposed § 122.68(a)(2) sets the multiple at five for most cases, but proposed § 122.68(a)(3) provides a mechanism for applying for a multiple other than five for particular effluents. Permittees who exceed the application-based limits established by § 122.68(a)(2) are subject to the same consequences (e.g., enforcement or permit modification) as any other type of permit violation.

No explicit limits are set for pollutants which are not required to be reported in the application. However, as noted above, the list of reportable pollutants may be expanded in the future, and BAT control equipment for the toxic pollutants will also serve to control many non-reported pollutants in the interim. Furthermore, the permitting authority may always modify a permit for cause, including the situation where biomonitoring tests identify a discharge as significantly toxic despite the installation of BAT equipment designed to control the reported pollutants. See §§ 122.9(e) and 122.73 of the proposed consolidated permit program regulations.

The factor of five for reportable pollutants was developed as a general measure of the magnitude of variation of pollutant levels normally found in waste streams. In recognition of the fact that the levels of pollutants in some waste streams may vary by a factor of more than five, § 122.68(a) includes a provision allowing permittees to demonstrate through testing that another multiplier is appropriate.

When a pollutant is not detected in a waste stream or is not reported as required in an application, the application-based limits under § 122.68(a)(2) are established as a multiple of the detection limit of the analytical method. Detection limits are usually included in the test methods promulgated under 40 CFR Part 136 (these limits are summarized in section E of the instructions to the consolidated application form, which appears as a public notice elsewhere in today's **Federal Register**). Where an approved method does not specify a detection limit, the detection limit may be determined by the applicant using standard analytical practices.

The proposed regulations also specify a detection limit of 10 μg/l (10 ppb) as the lowest level of detection that will be applied. In many cases, the actual detection limit is lower than 10 μg/l if a highly sensitive detector is used (e.g., electron capture), but for the purposes of the application-based limit, the detection limit is set to reflect the use of the least sensitive approved method.

The concept of an application-based limit was originally raised in the August 21, 1978 proposal of § 122.14(a), which provided that "[t]he permittee shall not discharge any pollutants for which information was requested in the application except as expressly authorized by the permit" and explained further in a comment that "the permit may specify that discharge levels for [the reported] pollutant are not to exceed the levels reported in the application." Today's proposal, which is less strict to account for normal variability of pollutant levels in waste streams, continues the philosophy that dischargers are responsible for their discharges and should not be permitted to significantly increase pollutant discharges above reported levels.

The reason for introducing a multiplier in today's proposal is not to allow permittees to increase their discharges, but to provide a sensible ceiling in acknowledgment of normal waste stream variability. The Agency believes that the multiple of five will ensure that pollutant discharges do not significantly increase from reported levels, without burdening permittees with technologically unreasonable limits. As

stated above, where the multiple of five does not adequately reflect the innate variability of pollutant levels in a waste stream, the proposed regulation affords the discharger the opportunity to demonstrate through testing that another multiplier is appropriate.

The application-based limit is clearly authorized by the Clean Water Act. Section 101(a)(1) of the CWA declares "the national goal [is] that the discharge of pollutants into the navigable waters be eliminated by 1985." Allowing dischargers to increase their pollutant discharges would contravene that goal. The application-based limit is also consistent with the technology-based requirements of section 301(b) of the CWA. Clearly, any level of pollution control which the applicant is already attaining is achievable through BAT or BCT.

The multiplier approach to establishing limitations for pollutants reported in an application form but which are not specifically limited in a permit was developed after extensive consideration of alternative approaches. The principal alternatives are:

1. Limit discharges to the levels reported in an application (as in the August 21, 1978 proposal of § 122.14(a));
2. Set pollutant-specific limits which would apply to all dischargers, e.g., no discharger shall discharge pollutant Y at concentrations greater than Z mg/l;
3. Allow applicants to choose a limit for each pollutant to which they would be willing to be held;
4. Limit applicants to reported levels of certain indicator pollutants only; or
5. Establish a biomonitoring-based overall toxicity limit.

All of these alternatives have certain advantages and certain disadvantages.

The first alternative would provide maximum environmental protection by minimizing allowable discharges. However, as mentioned previously, normal waste stream variability precludes the strict approach of limiting pollutants to reported levels.

The second alternative has the virtue of simplicity and clarity. Unfortunately, this approach cannot be supported by existing effluent data. Therefore, this option was rejected, at least for the present.

The third alternative also holds a certain attraction for its simplicity. Its deficiency lies in its leniency. It would be an ideal method for dischargers willing to accept reasonably low limits. However, for those dischargers who wished to circumvent liability by selecting inordinately high limits, protracted disputes would be unavoidable. This option is analogous to allowing applicants to select their own permit limits and, in the opinion of the Agency, would not lead to effective control of toxic pollutants.

The fourth alternative would serve to restrict excessive discharges of certain toxic pollutants in some instances. However, its utility is limited. While indicators are valuable in certain cases in helping to regulate the installation of BAT equipment to control specific toxics which have been identified in some waste streams, they cannot be applied effectively in all situations to ensure that discharges of the 129 toxic pollutants will not increase significantly from reported levels. As a result, this option was rejected.

The last major alternative considered was to set an overall toxicity limit on each waster stream based upon biomonitoring tests required of each applicant. While biomonitoring has certain uses, tests on complex waste streams to determine characteristics other than acute toxicity, such as chronic toxicity, carcinogenicity, and mutagenicity, are not well established. Further, biomonitoring for acute toxicity is not effective in detecting or limiting large discharges of pollutants which occur at low concentrations, such as in waste streams which are diluted after treatment by large volumes of noncontact cooling water. Further, the cost of conducting biomonitoring tests to determine chronic toxicity, carcinogenicity, and mutagenicity would be much higher than the costs of pollutant analyses required by proposed § 122.64(d). As a result, this alternative was also rejected. As explained in section III–B(2) of this preamble, however, biomonitoring tests are very useful in many instances. They will therefore play an important role in the Agency's strategy for implementing BAT–level control of toxic discharges.

After considering the other alternatives and finding them inadequate, the Agency selected the mulitplier approach. The principal remaining issue is the selection of a multiplier which is justifiable both analytically (accounts for variability) and environmentally (protects against significant increases in discharges of toxic pollutants).

Several commenters on the NPDES proposal of August 21, 1978 recommended the multiplier approach and suggested appropriate multipliers despite the fact that the Agency did not specifically raise this issue in the proposal. The suggestions were as follows:

1. A major industrial discharger expressed its support of proposed § 122.14(a) (renumbered in today's proposal as § 122.68(a)) and the accompanying comment, but suggested that permits contain the following language:

"For all pollutant(s) for which discharge is not limited or authorized in this permit by explict numerical effluent limitations, the permittee shall limit discharges to the amount declared at the time of permit application plus the additional amount or margin otherwise prescribed by the paragraph. If in the permit application the quantity of discharge was declared as a true measurement of discharge or was not otherwise identified, the permittee shall limit the discharge of such pollutant to an amount no more than fifty (50) percent greater than the average amount declared in the application. If in the permit application the presence of such pollutant was declared but the quantity of discharge was only estimated, the permittee shall limit the discharge of such pollutant to a level no more than one hundred (100) percent greater than, or twice the average amount estimated in the application." (Emphasis in the original).

2. Another commenter suggested that permittees be allowed to discharge pollutants which are not otherwise limited "so long as the levels of the pollutants in the discharge are within an order of magnitude (i.e., a factor of ten) of the levels set forth in the application."

3. Another commenter did not suggest a specific multiplier but stated that "variability factors should be comparable to those applied to annual averages used in effluent limitation guideline development for several industries."

A fourth commenter suggested that the application-based limit should simply reflect the "margin of error of both flow and analytical techniques."

In developing the multiplier used in this proposal, the Agency recognized that developing a single all-encompassing factor to describe the upper limit of pollutant variability in all kinds of industrial waste streams would be extremely difficult, if not impossible. A large factor, e.g., several orders of magnitude, could be used, but at the expense of abandoning the original purpose of the regulations, to protect against significant increases in discharges of pollutants not specifically limited in permits.

The Agency then decided to take the more practical approach of selecting a multiplier high enough to account for the variability of pollutants in waste streams that has been observed for the general case, and to provide an opportunity for each discharger with an unusually high range of variability to demonstrate its case and to qualify for a different factor.

Variability in the levels of pollutants found in waste streams is largely a result of the following:

1. The degree to which the sample taken from the waste stream is representative of the waste stream;

2. The accuracy and precision of the analytical method;

3. Fluctuations of pollutants in waste streams due to varying amounts of the substance in the raw material or as the result of the process; variations in the use of cleaners, algicides, solvents, etc.; effects of chemical reactions taking place in waste streams; and other factors.

With good sampling and analytical practices, the maximum margin of error resulting from the first two sources of variation above should be no more than ±100%. Since all of the Agency's studies of variability to date are based on actual samples, this margin of error is largely subsumed within the variability factors described below.

The Agency has analyzed in depth the long and short term variability of pollutant levels in the discharges of each of four plants in the pesticides industry. Table IV presents the variability factors developed in this study demonstrating the relationship between the daily maximum and the long-term average values for several pollutants. The number of observations is in parentheses.

Table IV.—Variability Factors in the Pesticides Industry

[Relationships between daily maximum and long-term average values]

	BOD	COD	TSS	Pesticide chemicals
Plant:				
3				9.4 (244)
21	7.7(354)		5.4 (360)	5.0 (141)
28		1.8 (82)		12.2 (92)
41	2.5 [95]	1.5 (121)	2.5 [122]	
Weighted average	6.8 (449)	1.6 (213)	4.7 (482)	7.8 (677)

The samples used to develop the above data were collected on a 24-hour basis. The test requirements for determining limits for organic pollutants for the purpose of § 122.68(a) will be a 72-hour Composite sample (or 3 consecutive 24-hour samples), which should have a substantial mitigating effect upon the variability factors for pesticides described above.

An analysis of the discharges of the same plants to determine the relationship between the long-term average and the 30-day average yielded variability factors of 1.1 to 1.5 for BOD, COD, and TSS and of 1.3 to 1.6 for the pesticides.

The Agency has frequently used multipliers in the past to describe plant-to-plant variations in developing effluent guidelines. Typically, effluent guidelines contain daily maximum limits which are several times the mean of the results of samples collected and analyzed from several plants in the subcategory. These multipliers are selected so that the discharge on any particular day may be predicted with a high degree of confidence to be below the daily maximum limits.

Multipliers in most of the guidelines promulgated to date have been in the range of 1½ to 3, which generally have been used to set daily maximum limits for traditionally regulated pollutants. Specific organic pollutants are often subject to the wider ranges of variability. Therefore, the multipliers of 1½ to 3 are almost certainly too low for purposes of proposed § 122.68(a)(2).

It should be noted, however, that the function of a multiplier in effluent guidelines is slightly different than its function in proposed § 122.68(a)(2). On the one hand, guidelines are based upon analyses of several samples, allowing a smaller multiplier to be used than is justified by the minimum requirement of one single sample used by an applicant. On the other hand, guideline multipliers must account for variability between plants so that a single limit may be made uniformly applicable throughout a subcategory, while proposed § 122.68(a)(2) need only account for the variability of a pollutant in a single waste stream. Overall, this latter difference implies the use of a smaller multiplier in proposed § 122.68(a)(2) than is used in developing effluent guidelines.

After considering the above, and after consultation with industrial groups, environmental groups, and with Federal and State permit writers, the Agency determined that a multiplier of five is appropriate to describe the normal variation of pollutants in most waste streams.

While the Agency has selected the multiplier of five based upon the best available data for the purpose of this proposal, it recognizes that its data base is incomplete. The Agency solicits comments and data on waste stream variability in various industries and on the question of whether different multipliers should be applied to different industries. Comments are also solicited on the question of whether different multipliers should be applied depending upon the reported levels (e.g., a higher multiplier when pollutants are reported at low concentrations and a lower multiplier when pollutants are reported at high concentrations).

In any case, the Agency recognizes that certain waste streams may be so variable that the reported levels may be exceeded by more than the finally promulgated multiplier. If the applicant believes that this may be the case, §122.68(a)(3) of today's proposal provides an opportunity to demonstrate through testing and statistical analysis that a higher multiplier is appropriate.

In developing an alternative multiplier, proposed § 122.68(a)(3) requires the submission of ten data points (24-hour samples analyzed for the pollutant of concern), and a statistical analysis to develop a limit representing an upper 99% confidence bound for the pollutant. Based on the ten data points, an acceptable computation of the upper confidence bound is:

$L = \exp(\bar{Y} + 2.96S)$,

where

$$L = \exp(\bar{Y} + 2.96S),$$

where

$$\bar{Y} = \frac{1}{10} \sum_{i=1}^{10} \ln X_i;$$

$$S^2 = \frac{1}{9} \sum_{i=1}^{10} (\bar{Y} - \ln X_i)^2;$$

L is the upper 99% confidence bound;

L is the upper 99% confidence bound;
X is the pollutant concentration of each data point;
ln is the natural logarithm; and
exp( ) is the antilogarithm.

The statistical interpretation of L is that a future concentration measurement of the particular pollutant will not exceed L with a confidence of 99%.

The equation described above is based on the classic two-sample statistical confidence region where the underlining distribution is lognormal and the first sample has size ten and the second has size one. The result of the equation is a confidence region with expectation being 99%. This general approach has been the basis of many effluent limitations guidelines and many limitations in negotiated permits (i.e.,

those for which no effluent guidelines existed) for the past five years. Over this period of time, the two major assumptions most closely examined in this methodology have been: (1) The assumption of lognormality; and (2) the size of the confidence associated with the region.

The Agency's experience in analyzing the data for each of the effluent guidelines it has promulgated has shown that in all cases the plant effluent data was lognormal or that the lognormal distribution overestimated the variability of actual plant effluent data. Thus, even where the data was not lognormal, the assumption of lognormality benefited the permittee.

Historically, the 99% level has been shown to be conservative enough to act as a control of the permittee's treatment system and liberal enough to allow normal operating variability without the risk of violation, except in the most severe cases. In addition, the risk to the permittee has been further reduced by the recent promulgation of a new "upset" provision in the NPDES regulations (§ 122.14(1) of the NPDES regulations, renumbered as § 122.68(c) in the proposed consolidated permit regulations which appear elsewhere in today's **Federal Register**). This provision provides permittees with an affirmative defense to enforcement actions brought for noncompliance with permit limits, based on factors beyond the control of the permittee. Thus the risk of being held liable for violations due to normal variations in effluents has been reduced to well beneath one per cent.

The Agency is also considering other procedures for demonstrating an alternative multiplier. We request comments on the methodology described here, and invite suggestions on other mechanisms to minimize the number of samples required and to make the most efficient use of this data to accomplish the goals of proposed § 122.68(a).

VI. Monitoring and Reporting

A. *Typical Monitoring Scheme*

Specific monitoring requirements are not contained in the NPDES program regulations promulgated on June 7, 1979. These regulations require in § 122.22 (renumbered as § 122.14 in the proposed consolidated regulations) that monitoring requirements be established in permits, but leave the permit writer the discretion to establish the type and frequency of monitoring requirements which are most appropriate to the particular discharger (although it should be noted that future effluent guidelines may specify monitoring requirements). Similarly, today's proposal, while clarifying in proposed § 122.71(a)(1) that monitoring requirements may be set for pollutants controlled by application-based limits, does not set specific monitoring requirements. However, for the purpose of demonstrating the range of choices available to permit writers under the new permitting strategy, a typical monitoring scheme (assuming the absence of a monitoring requirement specified by an effluent guideline) is presented below.

Typically, permittees will be required to monitor all pollutants which are specifically limited in the permit on a periodic basis to insure compliance with the permit limits. This conforms to existing practices. Monitoring costs will thus be substantially the same as at present except in those situations where a permit contains limits for specific organic toxics which require GC or GC/MS analysis.

Where the indicator approach is used, the permittee may be required to occasionally analyze for some or all of the toxic pollutants to insure that the treatment equipment is being operated and maintained properly and is adequately removing the toxics, and to help insure compliance with the application-based limit of § 122.68(a)(2). This monitoring will usually (but not always) be required only for those pollutants reported as present at significant levels in the application. Monitoring for the organic toxics might be based upon 24-hour composite samples for this purpose, resulting in lower costs than the 72-hour application sampling requirement imposes.

Permits might also make waste characterization requirements contingent upon other events. For example, as discussed in the next section of this preamble, a violation of a certain permit limit may be used to trigger a requirement to monitor for some or all toxic pollutants.

Another type of monitoring which may be required of permittees is biological monitoring, such as acute aquatic toxicity LC_{50} tests (appropriate test methods are contained in EPA's *Methods for Measuring the Acute Toxicity of Effluents to Aquatic Organisms*, EPA–600/4–78–012). These acute toxicity tests are generally less expensive than waste characterizations for organic pollutants. Therefore, some permit writers may require waste characterizations only sparingly but require acute toxicity tests on a more frequent basis. If the results of such tests indicate that a discharge is acutely toxic, the Director may then require the permittee to conduct a full waste characterization or take some other necessary action to detect the source of the toxicity. This authority is provided by section 308 of the CWA or similar State authority (see the Decision of EPA's General Counsel, January 11, 1979).

B. *Additional Monitoring When Indicator Limits are Violated*

One of the problems with using limits on indicator pollutants to control discharges of toxics is that a violation of a limitation on one or more indicator pollutants is not necessarily linked to an increased discharge of toxic pollutants. The response of the permitting authority and the discharger to any permit violation depends on the seriousness of the violation, which is not immediately apparent when a limitation on an indicator is violated. A violation that is accompanied by an increased discharge of toxics will require corrective action much greater in speed and extent than a violation of the indicator pollutant alone.

The Agency is considering addressing this problem by establishing a general regulation requiring permittees to conduct additional monitoring when they violate permit limitations on indicator pollutants. Under this requirement, each permit would contain a clause which would trigger a monitoring progam when certain permit limits are violated. This program would include monitoring appropriate for each site to determine the cause of the violation, necessary corrective measures, and the extent to which the violation resulted in discharges of toxic pollutants. Monitoring requirements might include an analysis for specific toxic pollutants, an effluent scan, or biological monitoring tests for acute toxicity. Under this scheme, each violation of an indicator limit would be evaluated on a case-by-case basis by the permitting authority to determine whether or not the additional monitoring program is necessary.

The authority to require additional monitoring is already available under section 308 of the CWA or similar State authority. However, the scheme outlined above would establish a monitoring program for each permittee at the time the permit is issued, rather than at the time the violation occurs. Because the monitoring program is clearly laid out and agreed to in advance, the permittee will be prepared to put it into effect as soon as the permitting authority determines that it is necessary.

The information generated by the monitoring program will allow an in-depth assessment of the seriousness of

the violation. A large discharge of toxic pollutants might cause a relatively small violation of a limit for an indicator pollutant, while a much greater violation might be accompanied by no increase in toxic pollutants. Information on the toxicity of the effluent will enable the permitting authority to decide the extent of further action needed to mitigate the effects of the violation and to determine whether additional permit limits are necessary to prevent future violations.

A regulation establishing this monitoring requirement has not been proposed in today's **Federal Register** (although a similar provision will appear in the proposed effluent limitations guidelines for the leather tanning industry), because the Agency has not yet developed a detailed scheme for implementing this provision. The Agency intends to determine precisely which monitoring techniques will be required and what criteria permitting authorities will use to determine whether a violation should trigger the monitoring. During this process, the Agency will consider how the information will be used and what the costs will be.

The Agency requests comments on the potential value of the scheme outlined above, and asks for suggestions on the most practical way to implement such a scheme.

VII. Economic and Resource Impacts of Application Reporting Requirements

A. *Unit Costs of Sampling and Analysis*

The incremental costs imposed by the new sampling and analysis requirements consist of the following two elements: (1) Costs imposed by the new requirement that certain applicants sample and analyze certain wasted streams for 115 organic toxic pollutants, and (2) costs imposed by the revision of existing reporting requirements for pollutants other than the organic toxics, including additions to and deletions from the current list of pollutants which must be reported and changes in the nature of reporting for certain pollutants retained on the list.

1. *Sampling and analysis of 115 organic toxics.* Sampling consists of 72-hour composites (and a series of grab samples for volatile organics). Analysis consists of either GC/MS screening (identification) followed by GC (or in the case of polynuclear aromatic hydrocarbons, LC) quantification, or GC/MS quantification alone.

Cost data was developed from a variety of sources, which yielded figures over a relatively large range. The rapidly declining trend of these costs, resulting from laboratories' increased usage of and familiarity with the analytical methods, suggests that the costs estimated in this proposal will decrease by the time the revised application requirements become effective. However, the Agency's costs estimates are based upon present-day unit prices, as of Spring 1979. The discussion below provides a brief review of available data followed by the Agency's estimates.

(a) *Sampling Costs.* Sampling costs will vary significantly, depending upon the choice of personnel involved in the operation. While some applicants will have in-house sampling capability (or at least partial capability), others may have to rely completely on the use of more expensive independent contractors.

The analysis below assumes that sampling will be performed manually rather than by automation. Manual sampling is more labor-intensive and costlier than automated sampling, but it is necessary in certain situations where automated equipment cannot be used (e.g., where flammable or explosive vapors may be present or where very large samples are required). Since automated sampling can be used in many cases, the total cost of sampling is overestimated here.

Using current prices, the approximate sampling cost breakdown in the case of complete reliance upon independent contractors (assuming the use of a 4-person sampling team for a 4-day sampling trip) is as follows:

Technicians @$60/day, ×3 sampling shifts = $240 × 4	$960
Supervisor @$120/day = 120 × 4	480
Reports (1 person-day, supervisor)	120
Overhead on contract salaries (150%)	2340
Equipment set up on site, 2 man-days	160
Disposable equipment, sample container preparation	130
Sample air transport	100
Subtotal, less personnel air fares, local travel and per diem	4290
Personnel air fare (estimated average) = $200/ea.	600
Personnel per diem/local travel = $50/day/person	800
Total	5690

Costs in a number of these categories, such as salaries, overhead rates and travel distances may vary significantly. However, the Agency believes that $5890 is a reasonable estimate of the discharger's cost to have an independent 4-man team to undertake a 4-day sampling trip.

The situation described above is the most expensive case. By using an experienced constract supervisor (and possibly contract sampling equipment) together with in-house technicians, sampling costs may be reduced by approximately $2650 because of reduced overhead, travel, and per diem expenses. (The presence of the supervisor will insure that the sampling results are sufficiently reliable for purpose of the application, offsetting a potential lack of experience by house technicians in this type of sampling.) This leaves a net sampling cost of approximately $3200 per 72-hour manual composite sample.

A sampling team can sample at least two (and possibly three) outfalls (or an intake plus one or two outfalls) simultaneously, depending on their proximity and on the sampling techniques required for each. While equipment costs must be duplicated, personnel-related costs need not be. Thus, the estimated cost per sample for two outfalls is $1800. If three outfalls can be sampled simultaneously, sampling costs per outfall decline further. For the purpose of computing the total incremental cost of complying with the proposed application requirements (section VII–C below), an average sampling cost of $2500 per sample will be assumed.

(b) *Cost of Analysis of GC/MS Screening Followed by GC Quantification.* For the purpose of determining GC/MS screening and GC quantification costs, it is assumed that applicants will forward their samples to independent laboratories for analysis.

The Agency has received data on GC/MS screening costs from several sources. Unit costs for over 2,000 analyses conducted as part of the effluent guidelines development have been decreasing steadily and presently start at a large-volume price of approximately $700. Industry estimates range widely ($400 to $4,000) due to differing assumptions concerning the "average" complex effluent, the degree of quality control which they anticipated might be required by the application requirements, standardization procedures and other factors. Independent laboratories have most frequently cited figures in the range of $1,000 to $2,000. Manufacturers of GC/MS equipment contend that recent improvements in technology, such as reductions of the time required to perform an analysis, have reduced the cost to as low as $400 per sample.

The above data, together with the fact that increased volume and improved technology have been steadily reducing costs, indicate that $750 may be a reasonable estimate of GC/MS screening costs. However, the Agency is assuming, for purposes of assessing the impact of its reporting requirements, that the cost will be $1,000.

Unlike GC/MS screening, which has a relatively fixed cost regardless of the number of pollutants analyzed (although

moderate cost reduction is obtainable by eliminating entire classes of pollutants from the analysis), GC or LC quantification costs are roughly proportional to the numbers of pollutants to be analyzed, as described below.

Ten to fifteen different CG or LC procedures may be needed to analyze for all 115 organic toxic pollutants. It is not possible to predict in advance how many of these organic pollutants will be found in a given effluent and how many of these could be analyzed by the same procedure.

The plant surveys which EPA has conducted as part of its project to develop new BAT effluent guidelines for toxic pollutants in 34 industries indicate that the number of organic toxic pollutans found in a given effluent varies widely (0–50), averaging about 5 organic toxic compounds per waste stream. Information is insufficent to allow assumption as to how many of these might in a particular situation be analyzed by using the same GC or LC procedures. It is therefore assumed that each of five pollutants would have to be determined by a different procedure at a cost ranging from $50 to $100 each (based upon sources of information similar to those used to generate GC/MS cost data). The Agency has assumed $75 per pollutant. Thus, for example, if five organic toxics have been identified by the GC/MS screening, about $375 must be expended to quantify those pollutants using GC and LC methods.

(c) *Cost of Analysis by GC/MS Quantification.* GC/MS Quantification may be approximately twice as expensive as GC/MS screening due to a need to repeat certain portions of the analysis using reference standards. The Agency assumes that the method used will require duplicate analyses and thus estimates the cost of GC/MS quantification as $2,000 (double the qualitative cost).

GC/MS screening followed by GC or LC quantification is less expensive than GC/MS quantification whenever the applicant's waste stream contains relatively few organic toxic pollutants. based on the above GC or LC estimate of $75 per pollutant, whenever GC/MS screening identifies more than 13 organic toxic pollutants, then GC/MS quantification becomes more cost-effective than GC or LC quantification. For example, treated discharges will, in most instances, be less expensive to analyze than those which are untreated or inadequately treated. The method of quantification selected by the applicant may depend on its assessment of how complex its waste stream is.

For purposes of computing the total incremental cost of complying with the proposed application requirements (section VII–C below), it will be assumed that all applicants will use quantitative GC/MS at $2,000 per analysis. Adding $2,000 for analysis to the assumed average sampling cost of $2,500, the average cost of sampling and analyzing the toxic organics will be assumed to be $4,500 per outfall.

2. *Sampling and analysis of pollutants other than the organic toxic pollutants.* The methods for analyzing for most of the pollutants other than the organic toxics (e.g., metals, ammonia, and other inorganic pollutants) are well established. Cost data for these pollutants is therefore more certain than the cost data for organic pollutants.

For sampling, today's proposal will result in little or no incremental cost for the inorganic pollutants over the cost of existing application requirements. Although certain pollutants formerly reported on a qualitative basis will now be required to be reported quantitatively, sampling techniques and their associated costs will remain substantially the same. Further, sampling for both the organic toxic pollutants and the other reported pollutants will usually be done at the same time and involve similar methods of collection (although a shorter interval and different preservation methods will be used for the inorganic pollutants). Therefore, any differences in sampling costs for the pollutants other than the organic toxics will be easily accounted for within the range of variability associated with the more expensive sampling costs for the organic toxic pollutants.

For analysis, the cost will increase somewhat from present requirements for the inorganic pollutants. These result from requirements that applicants analyze for certain pollutants (BOD, COD, TSS, total cyanide, and total phenols), whereas the old application allowed submission of estimates (although it should be noted that for these parameters, applicants usually submitted analytical data). In addition, new analytical costs will be incurred from a requirement to test for two pollutants not required to be reported by the present application, TOC And TKN. This increase in cost will be more than offset by the deletion of reporting requirements for certain other pollutants (algicides, calcium, chloride, chlorinated organic compounds, organic nitrogen, potassium, settleable matter, sodium, and specific conductance), and by the use of estimates instead of actual testing for certain other pollutants which presently are required to be tested.

The Agency estimates that incremental sampling and analysis costs for pollutants other than the organic toxics will range from $180 to $400. For purposes of computing the total incremental economic impacts in section VII–C below, an incremental cost of $300 is assumed.

B. *Unit Reporting Costs*

The preparation of the information which is required by proposed § 122.64(d) will require staff time, resulting in costs in addition to the analytical testing costs. These reporting costs include data development, collection and compilation by various levels of the applicant's staff (clerical, administrative and professional) and review by legal advisors, professional supervisors and managers.

The unit reporting costs will vary, depending on the nature and extent of the applicant's relevant activities and on the applicability of various reporting requirements to the applicant.

The chief factors are:

1. Group I dischargers will expend greater effort to study waste stream variability (including an examination of processes and raw materials) than Group II dischargers. Many Group I dischargers will also carefully study their waste streams and sites for potential discharges, leaks or spills of toxic pollutants in order to obtain exclusions from section 311 liabilities and requirements. Group II applicants, who are not generally expected to have significant pollutant discharges beyond the more traditional parameters, will be relatively unconcerned by these considerations.

2. Major dischargers will generally have more complex operations than minor dischargers. For major dischargers, large numbers of different processes may create complex waste streams which are then discharged through several outfalls. These considerations will require major dischargers to expend significantly more resources than minor dischargers.

The unit reporting costs of the new application form are summarized in Table V.

Table V.—*Unit Reporting Costs of New Application Form*

[Hours/source]

Type of question	Group I discharger		Group II discharger	
	Major	Minor	Major	Minor
General information	3	2	3	2
Environmental engineering data	22	8	16	6
Analysis of effluents	34	20	21	8
Graphics	4	4	4	4
Discharges not from outfalls	13	7	9	2
Variability analysis	26	14	4	2
Section 311 discharges	26	10	4	3
Total	128	71	61	25

In order to assess the incremental reporting impact of the new form over the old form, the total unit reporting costs of the old form were also assessed. It should be noted that the reporting cost assessments performed for Office of Management and Budget on the original NPDES application form indicated an unusually low unit cost of completing that form. This low original baseline cost is attributable to the fact that a large portion of the NPDES application requirements would be fulfilled in many cases by submitting applications completed under the old Refuse Act Permit Program (RAPP) administered by the U.S. Army Corps of Engineers. When the NPDES program came into being, these RAPP applications were often accepted as NPDES applications, so that the reporting costs of the original form were reported as incremental costs. For this reason, the total cost of the old form was recalculated.

These recalculated unit reporting costs are summarized in Table VI.

Table VI.—*Unit Reporting Cost of Old Application Form*

[Hours/source]

Type of question	Group I discharger		Group II discharger	
	Major	Minor	Major	Minor
General information	3	2	3	2
Environmental engineering data	44	18	30	18
Analysis of effluents	17	7	14	4
Graphics	4	4	4	4
Discharges not from outfalls	0	0	0	0
Variability analysis	0	0	0	0
Section 311 discharges	0	0	0	0
Total	68	31	57	28

The reporting burdens imposed by the proposed application requirements are comparable to those imposed by the expiring form. A number of unnecessary and burdensome requirements in the expiring application form have been deleted, but these deletions are largely offset by expanded requirements in some cases (such as projections of the variability of waste streams), and by new requirements in others (such as the optional requirement for reporting hazardous substances to gain exemptions from section 311).

Table VII.—*Incremental Unit Costs of New Application Form*

	Group I discharger		Group II discharger	
	Major	Minor	Major	Minor
Old form cost	$1,855	$765	$1,520	$665
New form cost	3,690	1,990	1,625	560
Incremental cost	1,835	1,224	105	105

The hourly reporting costs shown in Tables V and VI were translated into dollars by determining the time spent answering each type of question shown in those tables by three levels of personnel: Clerical (assumed to be $10/hour), mid-level business and technical ($25/hour), and professional, legal and managerial ($50/hour).

Based on the above, the incremental unit reporting cost of the new form is presented in Table VII.

Table VII illustrates that while the unit reporting cost of the new form is generally greater than the cost for the old form, the new form focuses reporting requirements on those industries with the greatest potential for toxic discharges (Group I). Note, however, that the incremental cost savings shown above for Group II minor dischargers is probably overstated since many of these dischargers completed a special "short form" rather than the complete NPDES application form analyzed above.

C. *Total Incremental Costs of Complying With the Proposed Application Requirements*

This section discusses the total additional costs imposed by the application requirements of proposed § 122.64(d) over those imposed by existing requirements. Section VIII of this preamble will also discuss other reporting costs which are not imposed by the proposed application requirements, including (1) the extra costs incurred by applicants who choose to analyze for section 311 hazardous substances, and (2) new monitoring costs (after permit issuance) which permit writers might be expected to impose, on a case-by-case basis, as a result of the new emphasis on the control of toxic pollutants.

The Agency has computed the total incremental costs of its new requirements by multiplying the unit costs derived in sections VII–A and VII–B above by the number of applicants or activities which are expected to incur those costs. The facts, estimates and assumptions used to compute the total incremental costs of the form are summarized in Table VIII.

Table VIII.—*Basis For Calculating Incremental Costs*

	Group I discharger		Group II discharger		Total
	Major	Minor	Major	Minor	
Number of dischargers	2,767	11,900	1,145	27,053	42,865
Number of intakes tested	1,383	5,950	573	13,526	25,432
Number of process wastewater outfalls	4,150	5,950	1,718	13,526	25,344
Number of process wastewater outfalls	5,534	11,900	2,290	27,053	46,777

1. *Number of applicants.* The number of existing industrial dischargers who will use the new application form is based upon the Agency's records of dischargers who presently have permits and may be expected to reapply upon permit expiration.

It should be noted that some dischargers will have had their effluents tested by EPA as part of EPA's effluent guidelines development program. Where such testing was consistent with the proposed application requirements, those test results may be reported and the applicants need not perform the analyses on its own. However, the analysis below assumes all applicants will do their own testing so that the estimated total cost is probably overestimated.

2. *Number of outfalls per applicant.* The Agency has estimated the average number of outfalls per discharger, based upon information received from EPA's Regional offices and from State offices. Major dischargers have, on the average, two nonprocess wastewater outfalls and one and a half process wastewater outfalls (i.e., 50% of major dischargers have one process wastewater outfall, and the remainder have two). On the average, minor dischargers have one nonprocess wastewater outfall and one half of a process wastewater outfall each. These are averages used for computation of total impacts; particularly plants may differ significantly. For example, certain major dischargers have as many as 20 process wastewater outfalls.

3. *Number of intakes to be tested by applicants.* In addition to sampling and analyzing outfalls, some applicants will be examining their intakes to obtain credit for pollutants in their intakes under § 122.70(g) of the consolidated permit program regulations. This credit is available only under certain circumstances, e.g., where the intake source is the same body of surface water (as opposed to a well, piped-in supply or other source) that receives the discharge for which the credit is sought. Another factor tending to reduce the total number of influent analyses is that plants with many outfalls generally have only one source of surface water influent (e.g., a single adjacent stream or lake). In light of the above considerations, the Agency has estimated that one half of all applicants will sample and analyze one intake point.

Based on the number of dischargers, tested intakes, process wastewater outfalls and nonprocess wastewater outfalls summarized above, Table IX sets forth subtotals and totals of all the costs imposed by the regulations over the next five years.

Table IX.—*Total Incremental Costs of Proposed Application*

	Group I dischargers		Group II dischargers		Total
	Major	Minor	Major	Minor	
Cost of sampling and analyzing for organic toxics	$24,690,000	$53,580,000	0	0	$78,449,000
Incremental cost of sampling and analyzing for pollutants other than organic toxics	3,000,000	7,140,000	$1,374,000	$16,232,000	27,746,000
Incremental reporting cost					16,934,000
Total incremental cost					123,129,000

The total incremental cost of complying with the proposed application requirements is approximately $123 million. The annualized cost (spreading the application costs over the five year duration of NPDES permits) is approximately $24.6 million per year.

While most small businesses subject to the NPDES program will be minor dischargers sustaining minimal reporting burdens, some will have highly toxic, variable or complex discharges which will increase the difficulty of preparing applications. While the Agency has concluded that these application requirements will not force closures (see section VII–D below), certain small businesses may find the proposed requirements burdensome. As described in section IV of this preamble, the Agency has sought to minimize burdens consistent with the requirements of the CWA (particularly the 1977 amendments). Comments are solicited on how reporting requirements for small businesses may be reduced without sacrificing the objectives and requirements of the CWA.

D. *Economic Impacts Upon Selected Industries*

The Agency conducted an analysis of the economic impact of the revised application reporting requirements upon Group I dischargers with process wastewater discharges (upon whom the chief burden of the new requirements fall). The analysis focused primarily on those facilities which will be most affected: Marginal, small volume facilities in Group I industries. The analysis was conducted for five industries—leather tanning, wood preserving, electroplating, foundries, and iron and steel. The first four industries were selected because many of the plants are small and thus more sensitive to newly imposed cost burdens than other industries. The iron and steel industry was selected to examine the analytical costs of a typical plant which contains a large number of process wastewater outfalls, resulting in correspondingly large analytical costs. No industry was discovered which consisted predominantly of small firms with more than one process wastewater outfall.

Costs vary significantly from plant to plant depending on the number of outfalls at a particular plant. The combined analytical and reporting costs for a plant with one process wastewater outfall will be small, on the order of $5,000, while the cost to a steelmaking facility with 10 process wastewater outfalls may be as high as $25,000.

The impact on prices, profits, and plant closures should be small for most industries although impacts may be significant in individual cases. The key economic indicators that were examined to estimate economic impacts are the ratios of testing costs to sales, to profits, and to total pollution control investment. The ratio of testing cost to sales indicates impact on price increases while the ratio of testing cost

to profit provides a rough indication of impact on profits and even closures. Table X summarizes the results for average small plants in each industry analyzed during the year that the permit application is submitted.

Table X.—*Economic Impacts of Testing Costs*

(figures in percentages)

Industry	Ratio of testing costs to—		
	Sales	Profits	Pollution control cost
Small tanneries	0.11	6	1.4
Wood preservers	3	N/A	0.7
Electroplaters (1–4 person job shops)	5.5	70	N/A
Foundries (10 person shops)	2	40	N/A
Iron and Steel	N/A	N/A	1–2

The economic data for the leather tanning, wood preserving, and foundry industries were obtained from economic impact analyses which have been or which are being prepared in support of forthcoming BAT effluent guidelines. Data for the steel and electroplating industries were taken from an earlier estimate developed when BPT guidelines and secondary treatment guidelines respectively were promulgated. The data is the best which the Agency currently has at its disposal.

One shortcoming of the Agency's data and analysis is the inability to separate direct dischargers from indirect dischargers in most of the industries. Since our data base includes direct dischargers and the data indicates a possible impact on some small dischargers, the Agency decided to use this data in its analysis. Economic impacts will be overstated since many small facilities are not direct dischargers, and thus are not subject to NPDES requirements. In addition, many small facilities do not discharge process wastewater, and thus are not affected by these application requirements. The Agency requests additional information of economic impacts on small facilities, and on alternatives for minimizing these impacts.

1. *Leather Tanning Industry.* In 1977, the leather tanning industry consisted of 400 plants, of which 188 had effluent discharges. Of these, only 18 were direct dischargers; 170 were indirect dischargers. All but a few of these dischargers have only one process wastewater outfall. The average value of sales per establishment was about $3.5 million in 1977. The pretax return on sales has varied between 4.5 and 6.5 percent over the last several years. The direct dischargers are considerably larger than the average plant in the industry. For example, a small cattle-hide chrome tannery has sales of $5 million. Although the new BAT guidelines have not yet been promulgated, it appears that BAT investment costs for this plant will be between $350,000 and $450,000. In this context, the application cost is small when viewed against either sales (0.11%) or BAT investment costs (1.4%). These percentages decrease significantly for larger facilities with sales of $16 million and BAT investment costs of about $875,000.

The effect on profits will be more noticeable. After-tax profits will be reduced by about 6 percent for a small tannery during the year that the permit application is submitted. Larger tanneries will be affected much less, with a profit reduction of about 1.5 %, although profit reductions are smaller by a factor of five if the application costs are spread over a five-year period. In all cases, the costs of waste stream testing will not affect the Agency's preliminary analysis for its forthcoming effluent guidelines that all existing direct discharges for the leather tanning industry are financially viable and should not close as a result of environmentally related expenditures.

2. *Wood Preserving Industry.* The wood preserving sector of the timber products processing industry contains only one direct discharger; thus the impact of the new requirements on this sector is slight. However, the Agency has developed considerably more economic data on this industry than for other similarly sensitive industries. Therefore, the Agency has studied the impact which the new reporting requirements would have upon wood preservers if they were direct dischargers. This analysis will serve with the foundry and electroplater analyses as an indication of the impact of the testing requirements upon small direct dischargers in other industries for which economic data bases are not as fully developed by the Agency.

The wood preserving industry also provides a good example of the impact of the testing requirements on a potential closure candidate. The industry has one highly vulnerable plant, based on a survey conducted in preparation of the Agency's BAT effluent guidelines. The testing costs for that plant are about 30% of sales and actually exceed expected profits. However, the testing costs are about 0.7% of the cost of pollution control investment. Thus, the dominant investment decision is whether to install the pollution control equipment, not whether to test the waste stream for toxic pollutants. On the other hand, these decisions are somewhat independent because the testing costs must be incurred at an earlier time and because business loans are less likely to be available to finance testing costs.

3. *Electroplating Industry.* The electroplating industry has a large number of small facilities. The average value of sales was $650,000 per establishment in 1977. According to a job shop survey which the Agency performed in 1977, 40% of the 3,000 job shops covered by Agency regulations were facilities with one to four employees. 90% of these discharge to POTW's. Since we were not able to separate indirect from direct dischargers, the assumption was made that direct dischargers are distributed among the different size groups in similar proportions to indirect dischargers. Based on a limited survey, it was concluded that average sales of facilities with one to four employees are about $89,000 while average profits are about $7,000. The application cost is thus about 5.6% of sales and 70% of profits for these small shops during the year that the permit application is submitted. Larger electroplaters will be affected much less, although there may also be significant impacts on sales and profits of some of the large facilities.

4. *Foundry Industry.* An analysis of the foundry industry also indicates that some smaller facilities may have difficulty absorbing the application cost. The Agency's financial data is only preliminary, but what is available shows that facilities with 10 or fewer employees (about 20% of the industry) have average sales of $250,000 and average profits of $12,400. The foundry industry is similar to the electroplating industry in that a large proportion (about 50%) of foundries discharge to POTW's, so that no application costs will be incurred for these facilities. Further, foundries with fewer than 10 employees rarely discharge process waste water, so that most facilities will not be required to test for toxic pollutants. Because of this, impacts are overstated, but for some of these smaller facilities, the application costs are about 2% of sales and 40% of profits during the year that the permit application is submitted.

5. *Steel Industry.* The Agency also examined the impact of the application form on the steel industry since some plants in the industry have a large number of process wastewater outfalls which must each be tested. Waste stream testing costs appear to be between 1 and 2% of BAT pollution control investment for a steel making

facility with 20 process waste water outfalls. Note that this is a worst case assumption; almost all steel facilities have less than ten process waste water outfalls, and most have three or less. Waste stream testing costs relative to pollution control should not be a significant factor in either plant closings or price increases in the industry, but the cost of waste stream testing could place a burden on small marginal facilities with numerous process wastewater outfalls.

The Agency is actively seeking information to more accurately characterize the overall sales, profits, pollution control investments, and typical numbers of process wastewater outfalls at plants in order to more accurately project impacts for the industries examined above. We also seek additional information on availability of loans to businesses to help finance testing costs, and on the aiblity of applicants to pass through these costs.

The Agency also invites comments and data on the impacts of the testing requirements on industries other than those discussed above.

E. Impact of Reporting Requirements Upon Independent Laboratory Capability

Several commenters upon the August 21, 1978 proposed NPDES regulations suggested that the analytical requirements to implement the NPDES strategy would exceed laboratory capacity. The comments referred specifically to capacity to perform GC/MS analysis, since GC/MS is a fairly recent technological development. The Agency has investigated this matter and concluded that laboratory GC/MS capacity be sufficient to meet expected demand. However, current supply appears to be tight, and some delays in obtaining analytical services from laboratories may occur.

The application will require analysis by either quantitative GC/MS (for which we are assuming two runs through the machine), or by qualitative GC/MS (one run) followed by quantitative GC. Since the number of process wastewater outfalls and intakes to be tested for the Group I applicants is estimated to be 17,433, the number of GC/MS runs should be somewhere between 17,000 and 35,000. Analysis of the permit expiration dates for the Group I applicants indicates that the majority of GC/MS tests will be performed between October 1979 and December 1980. The average demand rate for GC/MS tests is projected to be between 1200 and 2300 analyses per month over this period.

Current laboratory experience indicates that a GC/MS instrument can perform at least 20 sample analyses per month on single shifts and 40 per month on double shifts. A recent manufacturer's survey of available laboratories identified 98 GC/MS systems in 55 laboratories which are capable of performing the required analyses. Current laboratory capacity potential thus appears to be about 2,000 analyses per month on a single shift basis and 4,000 analyses per month on a double shift basis. This capacity is in addition to the in-house GC/MS capacity which many industries and universities have for research and other purposes.

Thus, existing capacity exceeds expected demand. Further, some growth can be anticipated; GC/MS capability in service laboratories has doubled over the past two years. This swift increase is also a reflection of how easily additional laboratory capacity can become available to meet demand.

Thus, sufficient capacity appears to exist, especially if the existing equipment is used on a double shift basis. The Agency solicits comments on the current availability of laboratories with GC/MS capability and on the level of capacity growth which may occur over the next few years.

VIII. Miscellaneous Cost Estimates for Reporting Which is Not Required By Proposed Requirements

A. Optional Application Reporting of Hazardous Substance Discharges

Reporting of section 311 hazardous substances is optional; only those seeking exemptions from the requirements and penalties of section 311 will analyze or estimate levels of discharges of these substances. Although such reporting is not required by the proposed application requirements, the Agency has considered the associated costs to provide applicants with an estimate of what such optional reporting will cost.

The Agency has designated 299 hazardous substances (40 CFR Part 117, published at 43 FR 10474, March 13, 1978 and at 44 FR 10628, February 16, 1979). Many of these are also listed under section 307(a) as toxic pollutants. Since proposed § 122.64(d)(16) will require toxic pollutants to be analyzed and reported by all applicants who are likely to have such pollutants in their waste streams, it is assumed for this analysis that no incremental costs from the section 311 exemption option will result with respect to hazardous substances on the toxic pollutants list.

The remaining hazardous substances include many substances which dissociate into ions in water. Of these ions, all but about thirty will be required to be reported by proposed § 122.64(d)(16). If an applicant sought an exemption for all of the remaining thirty ions, the incremental cost for sampling and analysis would be approximately $150.

Seventy-four hazardous substances are not on the toxics list and do not dissociate. Virtually all of these are organics and may be analyzed by GC and GC/MS techniques. For the purpose of analytical cost estimation, the Agency assumes that these substances will be present at significant levels only in the process wastewater discharges from Group I industries.

Thirty-six of the 74 hazardous substances may be analyzed by straightforward extension of the GC/MS protocol which will be proposed in the near future. Significant modifications (e.g. chromatographic column changes or extraction solvent changes) might be required in order to analyze the remaining 38 compounds by the GC/MS method.

Also, 45 of the 74 compounds may be effectively decomposed during conventional secondary biological treatment and 7 more compounds are likely to be effectively removed from the effluent during secondary treatment by adsorption onto other materials. (Only 13 of the compounds which are not decomposed or adsorbed during secondary treatment cannot be detected by the GC/MS method.) A large percentage of industrial dischargers met BPT by installation of some form of conventional biological treatment, so the prospects that these substances will appear in an effluent meeting BPT permit limits due to unanticipated, but routine, low-level sources appear to be low. The Agency is therefore assuming that most applicants will not analyze for all hazardous substances, especially since estimates are acceptable for these substances in the application form. Rather, the discharger most likely will analyze for a few materials known to be involved in some phase of its operations plus an even smaller number of suspected low-level contaminants.

By rough analogy to the average of 5 toxic pollutants found in process wastewater outfalls from primary industries (although the number found has ranged up to 50 in some cases), the Agency is assuming that an industrial discharger may suspect that an average of 3 of the non-dissociated hazardous substances and 4 of the dissociated ions may be present in a given effluent and

elect to analyze for them in order to seek an exemption from section 311 liabilities.

The discharger may analyze for the non-dissociated pollutants by using either GC or GC/MS techniques. The use of quantitative GC methods for 3 pollutants at a cost of $75 per pollutant leads to an overall cost of $225. If the suspected pollutants are among those analyzable by the GC/MS method, the added cost should be no more than 10% greater than that for the organic toxic pollutants because the additional analysis can be done at the same time. The total projected analytical cost for the organic toxics required to be analyzed by the application form plus the additional non-dissociated hazardous substances is about $2,200 per sample, using quantitative GC/MS. The incremental cost of analyzing for the hazardous substances (including ions) is about $300.

Since sampling for the hazardous substances will also usually be conducted in conjunction with sampling for the organic toxic pollutants, the Agency projects little or no incremental sampling cost for the hazardous substances.

If it is assumed that one half of Group I dischargers test their process waste water outfalls for hazardous substances and that one half of these also test their intakes in order to obtain credit under § 122.70(g), the optional reporting of hazardous substances will result in a total incremental analytical cost of $3,715,000.

Some additional reporting costs will also be incurred by these applicants, which have been included in section VII–B above.

The Agency has begun to examine the incremental treatment costs for those seeking to comply with section 402 and avoid section 311 liability. Preliminary investigation indicates that, in the majority of cases, the same treatment used to control the toxic pollutants in a particular discharge will also be capable of controlling the hazardous pollutants in that discharge. In such cases, the incremental treatment costs for the hazardous substance would be insignificant. When the hazardous substance regulations which were proposed on February 16, 1979 are finally promulgated, they will contain an expanded discussion of these incremental treatment costs.

B. *Compliance Monitoring Costs*

As mentioned in the discussion on monitoring (section VI above), no specific compliance monitoring requirements are set forth in either the NPDES program regulations promulgated on June 7, 1979 or in the regulations proposed today. However, it is anticipated that the new emphasis on toxics will result in new permit requirements to periodically monitor for certain toxic pollutants. Even where indicator pollutants are used to regulate toxic pollutants, occasional waste characterizations will generally be useful to insure the proper control of toxic pollutants and to support the application-based limit of § 122.68(a)(2).

It is not possible to predict the extent to which permit writers will require monitoring of toxics in permits. This monitoring will be required on a case-by-case basis and will depend largely on the nature of the permittee's waste stream (especially as revealed by the data reported in the application).

If it is assumed that all Group I majors are issued permits requiring annual organic toxics monitoring as described above and that one-half of these permittees monitor one intake each in order to obtain credit under § 122.70(g), then the total incremental annual monitoring cost will be $24,898,5000 ($4500 times 4150 process wastewater outfalls and 1383 intakes).

Note.—Executive Order 11821, as amended by Executive Order 11949, and OMB Circular A–107 require the preparation of economic impact statements for major regulations, defined as those with incremental annual impacts exceeding one hundred million dollars. As demonstrated in this preamble, the Environmental Protection Agency has examined costs and economic impacts as part of its decision-making process. It has determined, based on this analysis, that this document does not constitute a major regulation requiring the preparation of a separate economic impact statement. However, it believes that the detailed analysis contained in section VII of this preamble complies with the spirit and purpose of the executive orders and OMB circular.

Dated: June 4, 1979.

Douglas M. Costle,

Administrator.

PART 122—THERMAL DISCHARGES

§ 122.64 [Amended].

1. Section 122.64 is amended by renumbering paragraphs (d), (e), (f), and (g) as (e), (f), (g), and (h), respectively, and by adding a new paragraph (d) as follows:

* * * * *

(d) Existing manufacturing, commercial, mining, and silvicultural dischargers applying for NPDES permits shall provide the following information to the Director, using the application form provided by the Director:

[*Comment*—Permit application requirements for POTW's, new sources and new dischargers will be developed and proposed for addition to this paragraph at a future date.]

(1) Name, address, and telephone number of the applicant and the facility for which the application is submitted, if different.

(2) Identity and telephone number of applicant's authorized agent for the facility.

(3) Type of facility ownership (e.g. State, Federal, private).

(4)Up to four SIC codes which best reflect the principal products or services provided by the facility.

(5) A brief description of the nature of the business.

(6) A listing of all permits or construction approvals received or applied for under any of the following permit programs:

(i) NPDES permit program.

(ii) Underground injection control (UIC) permit program.

(iii) Hazardous waste permit program.

(iv) Prevention of significant deterioration (PSD) permit program.

(v) Air new source—nonattainment permit program.

(vi) National Emission Standards for Hazardous Pollutants (NESHAPS) preconstruction approval.

(vii) Ocean dumping permits.

(viii) Other relevant environmental permits, including State permits.

(7) A topographic map depicting the facility and each of its intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, each well where fluids from the facility are injected underground, and all known wells, springs, and surface water bodies in the area. The topographic map shall extend to at least one mile beyond the property boundaries of the source.

(8) The average and maximum daily rate of production or material used where applicable effluent guideline limitations promulgated under section 304 of the CWA are based on products, raw materials, or some other measure of operation. The units reported must be consistent with the units used in the applicable effluent guideline, and the data reported must reflect the actual operation of the plant as required by § 122.70(a)(2).

(9) A line drawing of the water flow through the facility indicating each source of intake water, each process, operation, or production area contributing to each discharge, and each treatment unit in place. A water balance must be indicated on the line drawing, showing intake and discharge flows, and

losses to process, atmosphere, or elsewhere.

(10) A listing of the average and maximum flows contributed by each type of waste stream to each outfall (including, but not limited to, sewage, noncontact cooling water, process wastewater, and storm runoff).

(11) A description of discharges which do not occur from an outfall and which contain toxic pollutants listed under section 307(a) or hazardous substances listed under section 311 which are or may be discharged as a result of unchannelled plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage. The description of such discharges shall include the source of the discharge, the estimated flow of the discharge, the receiving water, an identification of the toxic or hazardous pollutants, and estimated concentrations of each such pollutant.

(12) If the discharges described in subparagraphs (d) (10) and (11) are not continuous as defined in § 122.70(c), a description of the volume and frequency of each discharge occurrence (except for storm runoff and spillage or leaks).

(13) A copy of the applicant's Best Management Practices Plan, as required by § 125.104(c).

(14) For each outfall, a description of each process, operation, or production area which contributes to the effluent and a description of the treatment the resulting effluent receives.

(15) A description of any compliance schedules to which the facility is subject for construction, upgrading or operation of waste treatment equipment, including identification of abatement schedules, a description of each project, and a description of the present status of compliance with the schedule.

(16) A description of pollutant characteristics of the effluent discharged from outfalls (and the intake water where credit is desired under § 122.70(g) for pollutants present in the intake) as follows:

(i) for every applicant, quantitative data collected in accordance with analytical methods specified in 40 CFR Part 136 for every outfall for the following pollutants:

Biochemical Oxygen Demand (BOD_5).
Temperature (both winter and summer)
Chemical Oxygen Demand
Total Organic Carbon
pH
Total Suspended Solids
Total Cyanide
Total Phenols (4AAP)
Total Kjeldahl Nitrogen (as N)(TKN).

(ii) In addition, for all applicants in all industrial categories listed in Appendix A to this part and for all applicants in the asbestos industry (SIC 3292 and 3293) and in the ferroalloys industry (SIC 3313), quantitative data collected in accordance with analytical methods specified in 40 CFR Part 136 for all outfalls containing process wastewater for all pollutants on the section 307(a) list of toxic pollutants, except for cyanide, asbestos, and 2,3,7,8, Tetrachlorodibenzo-p-dioxin (TCDD).

(iii) In addition, for every applicant, data collected in accordance with analytical methods specified in 40 CFR Part 136 or on the basis of the applicant's best estimate for every outfall for the following pollutants:

Ammonia (as N), Asbestos, Barium, Total, Boron, Total, Bromide, Chlorine, Total Residual, Color, Fecal Coliform, Fluoride, Nitrate (as N), Nitrite (as N), Oil and Grease, Phosphorus (as P), total, Radioactivity, Sulfate (as SO_4), Sulfide (as S), Sulfite (as SO_3), Surfactants, Aluminum, Total, Cobalt, Total, Iron, Total, Magnesium, Total, Molybdenum, Total, Manganese, Total, Tin, Total, Titanium, Total.

2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

Any pollutant specified in paragraph (d)(16)(ii) of this section for all waste streams not required to be tested by that subparagraph. Any pesticide not required to be tested elsewhere by this paragraph for which an analytical method is specified in 40 CFR Part 136.

(iv) The name, address, and telephone number of each contract laboratory or consulting firm which performed any of the analyses required by this subparagraph.

(17) A description and a summary of results of biological monitoring tests, if any, which have been conducted within the last five years upon the discharge or upon the receiving water in relation to the facility.

(18) A description of any additional data of which the permittee is aware concerning the presence or levels in its discharges of any pollutants which are in addition to those pollutants reported under paragraphs (d)(11) and (d)(16) of this section.

(19) At the applicant's option, information required by 40 CFR 117.12(b)(2)(i) to obtain exclusions from the requirements and penalties of section 311 of the CWA.

(20) Such other information as the Director may require to assess the discharges of the facility and to determine whether to issue an NPDES permit.

[*Comment.*—Such additional information may include biomonitoring tests to assess the relative toxicity of discharges to fish and other aquatic life, and requirements to determine the cause of such toxicity].

* * * * *

§ 122.68 [Amended].

2. Section 122.68 is amended by deleting the comment following paragraph (a) and by revising paragraph (a) to read as follows:

(a) (1) No permittee shall discharge any pollutant at a level which exceeds any specific permit limitation for that pollutant.

(2) Except as provided in § 122.68(a)(3), if a permittee has reported or has been required to report the level of any pollutant concentration in its application and the permit does not specifically limit that pollutant, discharges of that pollutant shall be limited to:

(i) Five times the average value reported in the application; or

(ii) If the pollutant was not detected or not reported as required, five times the highest of the following concentrations:

(A) Ten micrograms per liter;

(B) The detection limit (or lowest appropriate concentration) specified in the applicable analytical method specified in 40 CFR Part 136; or

(C) A detection limit for the applicable analytical method as determined by the permittee. For the purposes of this paragraph, the detection limit shall be the lowest concentration with a signal-to-noise ratio of five to one or less, in accordance with any generally accepted procedure for determining the level of background noise. The determination of this detection limit may be based on either a laboratory standard or an individual sample.

[*Comment.*—The level of background noise is measured as the net difference in instrument response between the highest and lowest peaks in the baseline response of the instrument. The instrument's baseline is found where there is nothing causing an overall increase or decrease in instrument response. The level of signal is measured as the net response above the median baseline level.]

(3)(i) For the purposes of § 122.68(a)(2), an applicant may apply to the Director for application-based limitations reflecting a factor other than five. Each such application shall include the following:

(A) Ten 24-hour composite samples analyzed for the pollutant in accordance with methods specified in 40 CFR Part 136;

(B) An appropriate statistical analysis providing an upper 99% confidence bound for the concentration of each pollutant of concern; and

(C) such other data as may be required to determine the variability of the pollutant in an effluent.

(ii) Each such demonstration shall be submitted within 180 days following the date of submission of an NPDES application form. Prior to the Director's approval of any factor other than five, the requirements of § 122.68(a)(2) shall apply.

* * * * *

§ 122.70 [Amended].

3. Section 122.70 is amended by revising paragraph (c)(1) to read follows:

* * * * *

(c) * * *

(1) Maximum daily and average monthly discharge limitations for all dischargers other than publicly owned treatment works (although limitations established under § 122.68(a) (2) and (3) shall apply only as a maximum daily discharge limitation; and

* * * * *

§ 122.70 [Amended].

4. Section 122.70 is amended by revising paragraph (d) by replacing the period at the end of paragraph (d)(2) with "; or", and by adding a new paragraph (d)(3) to read as follows:

* * * * *

(d) * * *

(3) Limitations established by §§ 122.68(a) (2) and (3), which shall be applied on the basis of concentration.

* * * * *

§ 122.71 [Amended].

5. Section 122.71 is amended by revising paragraph (a)(1) to read as follows:

(a) * * *

(1) The amount, concentration, or other measurement specified in § 122.70 for each pollutant specified in the permit, including, where additional monitoring is specified in the permit, pollutants limited under § 122.68(a)(2);

* * * * *

PART 123—STATE CERTIFICATION OF ACTIVITIES REQUIRING A FEDERAL LICENSE OR PERMIT

§ 123.73 [Amended].

6. Section 123.73 is amended by revising paragraph (a) to read as follows:

* * * * *

(a) Section 122.64 (d), (f), (g)—(Applications for permits and variances);

* * * * *

PART 125—NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

§ 125.3 [Amended].

7. Section 125.3 is amended by adding new paragraphs (c)(4) and (g) to read as follows:

* * * * *

(c) * * *

(4) Limitations developed under paragraph (c)(2) of this section may be expressed, where appropriate, in terms of toxicity (e.g. "Permittee's LC_{50} shall not be less than X": *Provided* That it is shown that the limits reflect the application of the appropriate technological or other standard as required by section 301(b) of the CWA.

* * * * *

(g) The Director may set a permit limit for a conventional pollutant at a level more stringent than the best conventional pollutant control technology (BCT), or a limit for a nonconventional pollutant, which limit shall not be subject to modification under section 301 (c) or (g) of the CWA where:

(1) Effluent limitations guidelines specify the pollutant as an indicator for a toxic pollutant; or

(2)(i) The limitation reflects BAT-level control of discharges of one or more toxic pollutants which are present in the waste stream, and a specific BAT limitation upon the toxic pollutant(s) is not feasible for economic or technical reasons;

(ii) The permit identifies which toxic pollutants are intended to be controlled by use of the limitation; and

(iii) The statement of basis or fact sheet required by § 124.8 or § 124.9 sets forth the basis for the limitation, including a finding that compliance with the limitation will result in BAT-level control of the toxic pollutant discharges identified in subparagraph (2) of this paragraph and a finding that it would be economically or technically infeasible to directly limit the toxic pollutant(s).

[*Comments.*—Toxic pollutants identified under this subparagraph remain subject to the application-based limits of § 122.68(a)(2). The authority of this paragraph is in addition to that established by sections 208(e), 301(b)(1)(C), 302, 401, and 510 of the CWA.]

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